Polyethylene Terephthalate Resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan

Investigation Nos. 731-TA-1387-1391 (Final)

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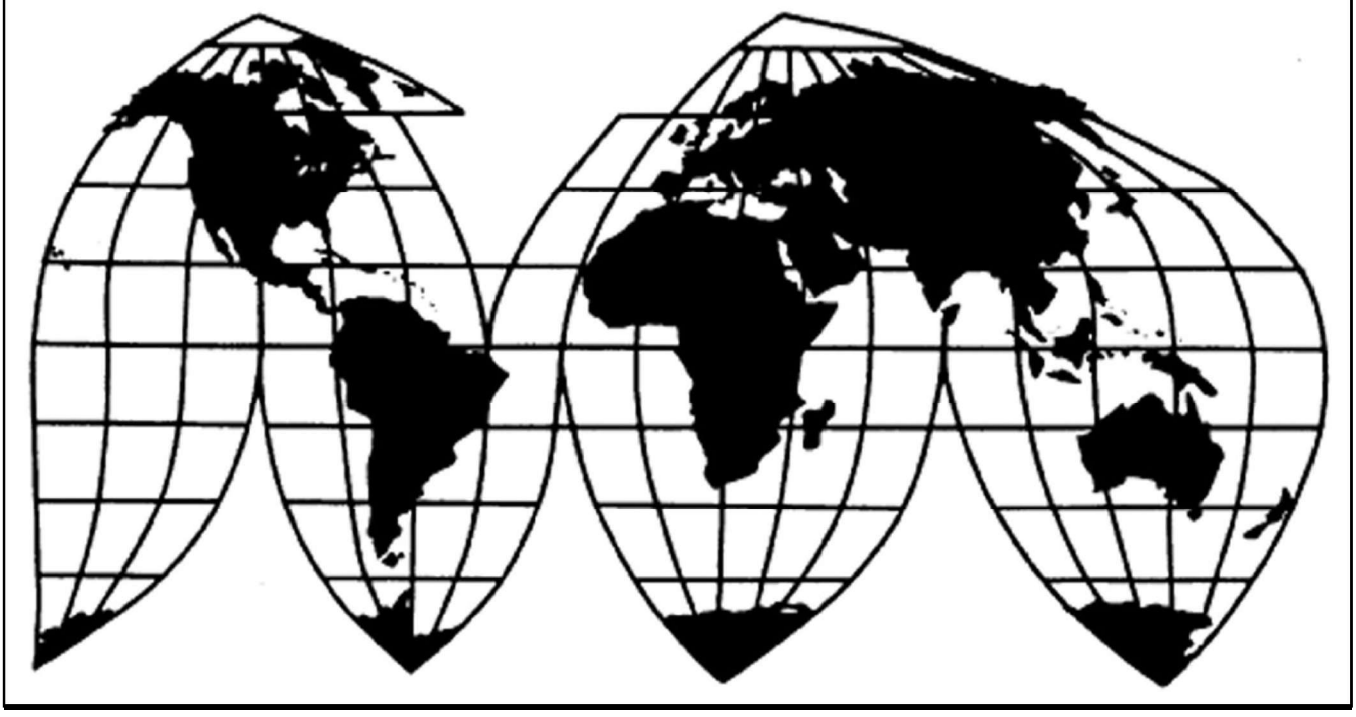
U.S. International Trade Commission



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Note.—Information that would reveal confidential operations of individual concerns may not be published. Such information is identified by brackets or by parallel lines in confidential reports and is deleted and replaced with asterisks in public reports.

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 731-TA-1387-1391 (Final)

Polyethylene Terephthalate Resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan

DETERMINATIONS

On the basis of the record[1] developed in the subject investigations, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that an industry in the United States is not materially injured or threatened with material injury by reason of imports of polyethylene terephthalate ("PET") resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan that have been found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value ("LTFV").[2] [3]

BACKGROUND

The Commission, pursuant to section 735(b) of the Act (19 U.S.C. 1673d(b)), instituted these investigations effective September 26, 2017, following receipt of petitions filed with the Commission and Commerce by DAK Americas LLC, Charlotte, North Carolina; Indorama Ventures USA, Inc., Decatur, Alabama; M&G Polymers USA, LLC, Houston, Texas; and Nan Ya Plastics Corporation, America, Lake City, South Carolina. The Commission scheduled the final phase of the investigations following notification of preliminary determinations by Commerce that imports of PET resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan were being sold at LTFV within the meaning of section 733(b) of the Act (19 U.S.C. 1673b(b)). Notice of the scheduling of the final phase of the Commission's investigations and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* of June 6, 2018 (53 FR 26306). The hearing was held in Washington, DC, on September 13, 2018, and all persons who requested the opportunity were permitted to appear in person or by counsel.

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[1] The record is defined in sec. 207.2(f) of the Commission's Rules of Practice and Procedure (19 CFR 207.2(f)).

[2] 83 FR 48278-48289 (September 24, 2018).

[3] Whether the establishment of an industry in the United States is materially retarded is not an issue in these investigations.

Views of the Commission

Based on the record in the final phase of these investigations, we determine that an industry in the United States is not materially injured or threatened with material injury by reason of imports of polyethylene terephthalate ("PET") resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value.

I. Background

The petitioners are DAK Americas LLC ("DAK"), Indorama Ventures USA, Inc. ("Indorama"), M&G Polymers USA, LLC ("M&G USA"),[1] and Nan Ya Plastics Corporation, America ("Nan Ya") (collectively, "Petitioners"). Each petitioner is a U.S. producer of certain PET resin. Representatives appeared at the hearing accompanied by counsel and submitted joint prehearing and posthearing briefs, and final comments.

Several Respondents participated in the hearing in the final phase of these investigations, including U.S. purchasers and importers of subject merchandise: Graham Packaging Company ("Graham"), iResin LLC ("iResin"), Niagara Bottling LLC ("Niagara"), Pactiv LLV ("Pactiv"), and PepsiCo, Inc. ("PepsiCo"); an association of U.S. purchasers and importers, The American Beverage Association; and subject producers from Pakistan Novatex Limited ("Novatex") and G-Pac Corporation ("G-Pac"). The government of Indonesia also participated at the hearing.[2] The government of Indonesia, iResin, and Niagara each submitted prehearing and posthearing briefs, and Novatex and G-Pac submitted joint prehearing and posthearing briefs, and final comments.

U.S. industry data are based on the questionnaire responses from four domestic producers that accounted for all domestic production of PET resin in 2017.[3] U.S. import data are based on questionnaire responses of 21 U.S. importers of PET resin that represent an estimated *** percent of total subject imports over the January 2015 to March 2018 period of investigation ("POI"); the import data accounted for *** percent of subject imports from Brazil, *** percent of subject imports from Indonesia, *** percent of subject imports from Korea, ***

[1] M&G USA filed for Chapter 11 bankruptcy in October 2017, one month after the filing of the petitions, and it did not actively participate in these final phase investigations. Petitioners' Prehearing Brief at 7; Confidential Report (INV-QQ-110, October 5, 2018) ("CR") at I-4 n.7, Public Report ("PR") at I-3 n.7; M&G USA U.S. Producers' Questionnaire at II-2b. M&G USA's production facility in Apple Grove, West Virginia was subsequently sold to Taiwan-based subject producer Far Eastern New Century Corporation. ("Far Eastern") in March 2018 and production in the facility restarted in ***. Petitioners' Prehearing Brief at 7; CR at I-4 n.7, and Table III-3, PR at I-3 n. 7, and Table III-3. M&G USA's bankruptcy also resulted in the sale of its under-construction Corpus Christi, Texas facility to a joint venture comprised of Alpek (the parent company of DAK), Indorama Ventures (the parent company of Indorama), and Far Eastern. Petitioners' Prehearing Brief at 7-8; CR at I-4 n.8, III-12, PR at I-3 n.8, III-7. Construction of the Corpus Christi facility has yet to be completed as of October 5, 2018.

[2] CR/PR, Appendix B.

[3] CR at I-5, PR at I-4.

percent of subject imports from Pakistan, and *** percent of subject imports from Taiwan.[4] Foreign industry data are based on questionnaire responses from two firms in Brazil, three firms in Indonesia, three firms in Korea, one firm in Pakistan, and two firms in Taiwan, which accounted for essentially all known Brazilian, Indonesian, and Korean production in 2017, and represented *** percent and *** percent of total PET resin production in Taiwan and Pakistan in 2017, respectively. These firms also accounted for *** subject imports from Brazil, Indonesia, and Pakistan, and represented *** percent of subject imports from Korea and *** percent of subject imports from Taiwan.[5]

Prior Investigations. PET resin has been the subject of two prior sets of countervailing and antidumping duty investigations in the United States.[6] In 2004, the Department of Commerce ("Commerce") initiated antidumping and countervailing duty investigations on PET resin from India, Indonesia, Taiwan, and Thailand.[7] The Commission terminated the antidumping duty investigation on PET resin from Taiwan and the countervailing duty investigation on PET resin from Thailand pursuant to negative final determinations by Commerce.[8] The Commission also reached negative determinations as to imports of PET resin from India, Indonesia, and Thailand.[9] In 2015, Commerce initiated antidumping and countervailing duty investigations on PET resin from Canada, China, India, and Oman.[10] Following Commerce's final affirmative antidumping and countervailing duty determinations, the Commission made affirmative determinations on imports of PET resin from Canada, China, India, and Oman.[11]

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[4] CR at I-6, IV-1 n.3, PR at I-5, IV-1 n.3.

[5] CR at I-6, PR at I-5.

[6] CR at I-7, PR at I-5.

[7] *Notice of Initiation of Countervailing Duty Investigations: Bottle-Grade Polyethylene Terephthalate (PET) Resin from India (C-533-842) and Thailand (C-549-824)*, 69 Fed. Reg. 21086 (April 20, 2004); *Notice of Initiation of Antidumping Duty Investigations: Bottle-Grade Polyethylene Terephthalate (PET) Resin from India, Indonesia, Taiwan, and Thailand*, 69 Fed. Reg. 21082 (April 20, 2004).

[8] *Polyethylene Terephthalate ("PET") Resin from Thailand*, 70 Fed. Reg. 15884 (March 29, 2005); *Polyethylene Terephthalate (PET) Resin from India, Indonesia, and Thailand*, Inv. Nos. 701-TA-439 and 731-TA-1077, 1078, 1080 (Final), USITC Pub. 3769 (May 2005) ("PET Resin from India *et al.*") at 1 n.3.

[9] PET Resin from India *et. al.*, USITC Pub. 3769 at 1.

[10] CR at I-7, PR at I-5; *Certain Polyethylene Terephthalate Resin from Canada, the People's Republic of China, India, and the Sultanate of Oman: Initiation of Less-Than-Fair-Value Investigations*, 80 Fed. Reg. 18376 (April 6, 2015); *Certain Polyethylene Terephthalate Resin from the People's Republic of China, India, and the Sultanate of Oman: Initiation of Countervailing Duty Investigations*, 80 Fed. Reg. 18369 (April 6, 2015).

[11] *Certain Polyethylene Terephthalate Resin from Canada*, *China, India, and Oman*, Inv. Nos. 701-TA-531-533 and 731-TA-1270-1273, USITC Pub. 4604 (April 2016) (Final) ("*PET Resin from Canada et al.*"). Commerce made final affirmative antidumping duty determinations with respect to imports from Canada, China, India, and Oman, and final affirmative countervailing duty determinations with respect to China and India. *Id*.

II. Domestic Like Product

A. In General

In determining whether an industry in the United States is materially injured or threatened with material injury by reason of imports of subject merchandise, the Commission first defines the "domestic like product" and the "industry."[12] Section 771(4)(A) of the Tariff Act of 1930, as amended ("the Tariff Act"), defines the relevant domestic industry as the "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[13] In turn, the Tariff Act defines "domestic like product" as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation."[14]

The decision regarding the appropriate domestic like product in an investigation is a factual determination, and the Commission has applied the statutory standard of "like" or "most similar in characteristics and uses" on a case-by-case basis.[15] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[16] The Commission looks for clear dividing lines among possible like products and disregards minor variations.[17] Although the Commission must accept Commerce's determination as to the scope of the imported merchandise that is subsidized or

[12] 19 U.S.C. § 1677(4)(A).

[13] 19 U.S.C. § 1677(4)(A).

[14] 19 U.S.C. § 1677(10).

[15] *See*, *e.g.*, *Cleo Inc. v. United States*, 501 F.3d 1291, 1299 (Fed. Cir. 2007); *NEC Corp. v. Department of Commerce*, 36 F. Supp. 2d 380, 383 (Ct. Int'l Trade 1998); *Nippon Steel Corp. v. United States*, 19 CIT 450, 455 (1995); *Torrington Co. v. United States*, 747 F. Supp. 744, 749 n.3 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991) ("every like product determination 'must be made on the particular record at issue' and the 'unique facts of each case'"). The Commission generally considers a number of factors, including the following: (1) physical characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) customer and producer perceptions of the products; (5) common manufacturing facilities, production processes, and production employees; and, where appropriate, (6) price. *See Nippon*, 19 CIT at 455 n.4; *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996).

[16] *See*, *e.g.*, S. Rep. No. 96-249 at 90-91 (1979).

[17] *Nippon*, 19 CIT at 455; *Torrington*, 747 F. Supp. at 748-49; *see also* S. Rep. No. 96-249 at 90-91 (Congress has indicated that the like product standard should not be interpreted in "such a narrow fashion as to permit minor differences in physical characteristics or uses to lead to the conclusion that the product and article are not 'like' each other, nor should the definition of 'like product' be interpreted in such a fashion as to prevent consideration of an industry adversely affected by the imports under consideration.").

sold at less than fair value,[18] the Commission determines what domestic product is like the imported articles Commerce has identified.[19]

B. Product Description

Commerce defined the scope of the imported merchandise under investigations as follows:

> The merchandise covered by these investigations is polyethylene terephthalate (PET) resin having an intrinsic viscosity of at least 70, but not more than 88, milliliters per gram (0.70 to 0.88 deciliters per gram). The scope includes blends of virgin PET resin and recycled PET resin containing 50 percent or more virgin PET resin content by weight, provided such blends meet the intrinsic viscosity requirements above. The scope includes all PET resin meeting the above specifications regardless of additives introduced in the manufacturing process.
>
> The scope excludes PET-glycol resin, also referred to as PETG. PET-glycol resins are manufactured by replacing a portion of the raw material input monoethylene glycol (MEG) with one of five glycol modifiers: Cyclohexanedimethanol (CHDM), diethylene glycol (DEG), neopentyl glycol (NPG), isosorbide, or spiro glycol. Specifically, excluded PET-glycol resins must contain a minimum of 10 percent, by weight, of CHDM, DEG, NPG, isosorbide or spiro glycol, or some combination of these glycol modifiers. Unlike subject PET resin, PET-glycol resins are amorphous resins that are not solid-stated and cannot be crystallized or recycled.
>
> The merchandise subject to these investigations is properly classified under subheadings 3907.61.0000 and 3907.69.0000 of the Harmonized Tariff Schedule of the United States (HTSUS). Although the HTSUS subheadings are provided for convenience and customs purposes, the

[18] *See*, *e.g., USEC, Inc. v. United States*, 34 Fed. Appx. 725, 730 (Fed. Cir. 2002) ("The ITC may not modify the class or kind of imported merchandise examined by Commerce."); *Algoma Steel Corp. v. United States*, 688 F. Supp. 639, 644 (Ct. Int'l Trade 1988), *aff'd*, 865 F.3d 240 (Fed. Cir.), *cert. denied*, 492 U.S. 919 (1989).

[19] *Hosiden Corp. v. Advanced Display Mfrs.*, 85 F.3d 1561, 1568 (Fed. Cir. 1996) (the Commission may find a single like product corresponding to several different classes or kinds defined by Commerce); *Cleo*, 501 F.3d at 1298 n.1 ("Commerce's {scope} finding does not control the Commission's {like product} determination."); *Torrington*, 747 F. Supp. at 748-52 (affirming the Commission's determination defining six like products in investigations in which Commerce found five classes or kinds).

written description of the merchandise covered by these investigations is dispositive.[20]

PET resin is a large-volume, commodity-grade thermoplastic polyester polymer sold predominantly in bulk form to downstream end users. The major end uses for PET resin include bottles for beverages (*e.g.*, juice, water, and carbonated soft drinks), containers for food (*e.g.*, salad dressings, jams and jellies, peanut butter, and edible oils), household cleaners, and cosmetics. PET resin can also be used to produce other forms of packaging, such as food trays and drinking cups, as well as carpet fibers.[21] The scope defines PET resin as having an intrinsic viscosity ("IV") of at least 0.70, but not more than 0.88 deciliters per gram. IV is a measure of the molecular weight of PET resin and is a reflection of the resin's melting point, crystallinity and tensile strength.[22]

C. Domestic Like Product Analysis

In the preliminary determinations, the Commission found that domestically produced PET resin products use the same basic chemistry, raw materials, manufacturing facilities, and production process, and have the same end uses. The Commission also found that these products are sold through the same channels of distribution, are largely interchangeable, and are sold at roughly comparable prices.[23] For those reasons, the Commission defined a single domestic like product, coextensive with the scope of the investigations.[24]

In the final phase of these investigations, Petitioners urge the Commission to again define the domestic like product as coextensive with the scope of the investigations.[25] None of the Respondents make any domestic like product arguments. There is no new information in the final phase of these investigations about the characteristics of PET resin that warrant a definition different from that in the preliminary phase of these investigations. Accordingly, for

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[20] *Polyethylene Terephthalate Resin from Pakistan: Final Determination of Sales at Less Than Fair Value*, 83 Fed. Reg. 48281 (Sept. 24, 2018); *Polyethylene Terephthalate Resin From Indonesia: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Determination of Critical Circumstances, in Part*, 83 Fed. Red. 48278 (Sept. 24, 2018); *Polyethylene Terephthalate Resin From the Republic of Korea: Affirmative Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part*, 83 Fed. Reg. 48283 (Sept. 24, 2018); *Polyethylene Terephthalate Resin From Brazil: Final Determination of Sales at Less Than Fair Value*, 83 Fed. Reg. 48285 (Sept. 24, 2018); *Polyethylene Terephthalate Resin From Taiwan: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Determination of Critical Circumstances, in Part*, 83 Fed. Reg. 48287 (Sept. 24, 2018).

[21] CR at I-12, PR at I-9 to 10.

[22] CR at I-12, PR at I-10.

[23] *Polyethylene Terephthalate (PET) Resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan*, Inv. Nos. 731-TA-1387-1391 (Preliminary), USITC Pub. 4740 (November 2017) ("PET Resin Preliminary Determinations") at 6-8.

[24] PET Resin Preliminary Determinations, USITC Pub. 4740 at 8.

[25] Petitioners' Prehearing Brief at 4-7.

the reasons set forth in our preliminary determinations, we define a single domestic like product coextensive with Commerce's scope.

III. Domestic Industry

The domestic industry is defined as the domestic "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[26] In defining the domestic industry, the Commission's general practice has been to include in the industry producers of all domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.

We must determine whether any producer of the domestic like product should be excluded from the domestic industry pursuant to section 771(4)(B) of the Tariff Act. This provision allows the Commission, if appropriate circumstances exist, to exclude from the domestic industry producers that are related to an exporter or importer of subject merchandise or which are themselves importers.[27] Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each investigation.[28] In the final phase of these investigations, *** domestic producers (***) are related parties because they imported subject merchandise.[29]

Petitioners state that the domestic industry consists of all domestic producers of PET resin.[30] They support the Commission's definition in the preliminary phase determinations that none of the *** related domestic producers (***) should be excluded from the domestic industry because each producer has a demonstrated primary interest in domestic production.[31] Specifically, Petitioners contend that while these related producers imported subject

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[26] 19 U.S.C. § 1677(4)(A).

[27] *See Torrington Co. v. United States*, 790 F. Supp. 1161, 1168 (Ct. Int'l Trade 1992), *aff'd without opinion*, 991 F.2d 809 (Fed. Cir. 1993); *Sandvik AB v. United States*, 721 F. Supp. 1322, 1331-32 (Ct. Int'l Trade 1989), *aff'd mem*., 904 F.2d 46 (Fed. Cir. 1990); *Empire Plow Co. v. United States*, 675 F. Supp. 1348, 1352 (Ct. Int'l Trade 1987).

[28] The primary factors the Commission has examined in deciding whether appropriate circumstances exist to exclude a related party include the following:

(1) the percentage of domestic production attributable to the importing producer;

(2) the reason the U.S. producer has decided to import the product subject to investigation (whether the firm benefits from the LTFV sales or subsidies or whether the firm must import in order to enable it to continue production and compete in the U.S. market);

(3) whether inclusion or exclusion of the related party will skew the data for the rest of the industry;

(4) the ratio of import shipments to U.S. production for the imported product; and

(5) whether the primary interest of the importing producer lies in domestic production or importation. *Changzhou Trina Solar Energy Co. v. USITC*, 100 F. Supp.3d 1314, 1326-31 (Ct. Int'l. Trade 2015); *see also Torrington Co. v. United States*, 790 F. Supp. at 1168.

[29] CR at III-22, PR at III-13.

[30] Petitioners' Prehearing Brief at 7-8.

[31] Petitioners' Prehearing Brief at 8.

merchandise during the POI, the ratio of their subject imports to domestic production is small and their support for the current trade actions indicates that their primary interest is in domestic production.[32] Petitioners also assert that neither *** control the export decisions of their foreign affiliates.[33]

We discuss below whether appropriate circumstances exist to exclude any of the related parties from the domestic industry.

***. *** imported subject merchandise from Indonesia during the POI and thus is a related party.[34] As a ratio to its U.S. production, its subject imports were *** percent in 2015, *** percent in 2015, *** percent in 2017, and *** percent in January to March ("interim") 2018.[35] *** indicated that it imported ***.[36] While its operating performance was *** the industry average for most of the POI,[37] *** also accounted for a *** of the domestic industry's capital expenditures.[38] *** was responsible for *** percent of U.S. production of PET resin in 2017. As such, it is the *** domestic producer in 2017.[39] It supports the petitions, except with respect to imports from Indonesia, on which it takes no position.[40]

We find that appropriate circumstances do not exist to exclude *** from the domestic industry as a related party. Since its subject imports were *** relative to its domestic production, its principal interest appears to lie in domestic production.[41] Furthermore, it has made *** in its domestic production of PET resin reflecting that its commitment and primary interest are in domestic production.

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[32] Petitioners' Prehearing Brief at 8-10.

[33] Petitioners' Posthearing Brief, Answers to Commissioner Questions at 4.

[34] CR/PR at Table III-9. *** is affiliated with subject producers *** through common ownership by ***, and it is also affiliated with an importer of subject merchandise *** through common ownership. CR/PR at Table III-2. Neither *** reported any exports to the United States during the POI. *** Foreign Producers'/Exporters' Questionnaire at II-8. *** is also affiliated with subject producer *** through "family" ownership. CR at III-5, PR at III-2. *** states that subject imports from *** were sourced from *** as it is "***." Hearing Tr. at 63 (Paramsivam); Petitioners' Posthearing Brief, Answers to Commissioner Questions at 5 n.1. We also observe that *** is affiliated with *** PET resin producers through common ownership. CR at VII-11, PR at VII-8. The record indicates that ***. CR at III-12, PR at III-7; CR/PR at Table III-3. *** reported no ***. *** Foreign Producers'/Exporters' Questionnaire at II-8.

[35] CR/PR at Table III-9. *** volume of subject imports from *** was *** pounds in 2015, *** pounds in 2016, *** pounds in 2017, and *** pounds in interim 2018. *Id*. The record also indicates that *** purchased *** pounds of PET resin from *** in 2016. *Id*.

[36] CR/PR at Table III-9.

[37] CR/PR at Table VI-3. Its ratio of operating income to net sales was *** percent in 2015, *** percent in 2016, *** percent in 2017, and *** percent in interim 2018. *Id*.

[38] CR at VI-17 to 18, PR at VI-5.

[39] CR/PR at Table III-1.

[40] CR/PR at Table III-1.

[41] We also examined the foreign producer data relating to its newly acquired facility previously owned by *** and observe that while the firm had exports to the United States during the POI, it did not have any exports to the United States in interim 2018 and that it is projected to export *** amounts of PET resin in 2018 and 2019. *** Foreign Producers'/Exporters' Questionnaire at Table II-8.

***. *** imported subject merchandise from *** during the POI.[42] As a ratio of its U.S. production, its subject imports were *** percent in 2015, *** percent in 2016, and *** percent in 2017.[43] *** indicated that its imports were ***.[44]

*** operating performance was *** the industry average throughout the POI.[45] *** capital expenditures, primarily relate to ***.[46] ***, was responsible for *** percent of U.S. production of PET resin in 2017. As such, it was the *** domestic producer in 2017.[47] It supports the petitions except with respect to imports from Brazil, on which it takes no position.[48] ***.[49]

We find that appropriate circumstances do not exist to exclude *** from the domestic industry as a related party. As the Commission found in the preliminary determinations, although the volume of *** subject imports ***, its subject imports relative to U.S. production were *** during the POI.[50] Moreover, it made *** in the U.S. market and, therefore, its principal interest appeared to be in domestic production. Additionally, there was no apparent correlation between *** financial performance and its importation activities so it does not suggest that it had benefitted meaningfully from the increasing volumes of subject merchandise it imported.

Nan Ya We observe that domestic producer Nan Ya is a wholly owned subsidiary of Taiwan-based PET resin producer Nan Ya Plastics Corporation (Taiwan).[51] While a representative from Nan Ya testified that its Taiwan-based parent did not export subject merchandise into the United States during the POI, *** import data indicate that Nan Ya Plastics Corporation (Taiwan) may have exported subject merchandise during the POI.[52] Accordingly, Nan Ya may be a related party because it is controlled by a possible exporter of subject merchandise.[53]

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[42] CR/PR at Table III-9. As mentioned above, *** in October 2017 and *** in March 2018. CR at III-12, PR at III-7. Additionally, *** was affiliated with subject producer ***, which was subsequently acquired by *** as part of ***. *** exported *** pounds in 2015, *** pounds in 2016, and *** pounds in 2017. *** Foreign Producer's/Exporters' Questionnaire at II-8. All of *** imports from Brazil were from ***. *** U.S. Importers' Questionnaire at II-5a.

[43] CR/PR at Table III-9. The volume increased from *** pounds in 2015 to *** pounds in 2016, and *** pounds in 2017.

[44] CR/PR at Table III-9.

[45] CR/PR at Table VI-2. This firm's ratio of operating income to net sales was *** percent in 2015, *** percent in 2016, *** percent in 2017. *Id*.

[46] CR at VI-18, PR at VI-5.

[47] CR/PR at Table III-1.

[48] CR/PR at Table III-1.

[49] CR/PR at Table III-4.

[50] *** reported that it imported to "***." *** Import Questionnaire at II-4.

[51] CR at III-5, PR at III-2; CR/PR at Table III-2.

[52] Hearing Tr. at 60-62 (Freeman); Import Statistics File, EDIS Doc. No. 652415. Nan Ya Plastics Corporation (Taiwan) did not provide a foreign producer questionnaire response. CR at VII-36 n.28, PR at VII-23 n.28.

[53] *See* 19 U.S.C. § 1677(4)(B)(ii)(II).

Assuming *arguendo* that Nan Ya is a related party, we find appropriate circumstances do not exist to exclude it from the domestic industry. Nan Ya did not import any PET resin into the United States during the POI, thus its primary interest appears to be in domestic production.[54] Possible exports by its Taiwan-based parent were also relatively small.[55] Nan Ya's operating ratio was *** the industry average throughout the POI.[56] Nan Ya was also the *** domestic producer accounting for *** percent of domestic production in 2017, and it supports the petitions.[57] Consequently, we find that appropriate circumstances do not exist to exclude Nan Ya from the domestic industry as a related party.

DAK. The record also indicates that DAK became affiliated with subject producer Compania Integrada Textil de Pernambuco ("Citepe") through DAK's parent company Americas Exterior, S.L. Sociedad Unipersonal, which acquired Citepe in April 2018.[58] Accordingly, DAK is currently a related party because a third party directly controls a domestic producer and exporter or importer.[59] However, DAK was neither an importer of subject merchandise nor affiliated with any importer or exporter of subject merchandise between January 2015 and the end of the POI in March 2018, so its primary interest was in domestic production throughout the POI. In addition, Citepe projects that ***.[60] Consequently, we find that appropriate circumstances do not exist to exclude DAK from the domestic industry as a related party.

IV. Cumulation[61]

For purposes of evaluating the volume and effects for a determination of material injury by reason of subject imports, section 771(7)(G)(i) of the Tariff Act requires the Commission to

[54] Hearing Tr. at 62 (Freeman); Nan Ya U.S. Producers' Questionnaire at II-6.

[55] Import Statistics File, EDIS Doc. No. 652415.

[56] CR/PR at Table VI-2.

[57] CR/PR at Table III-1.

[58] CR at III-7, PR at III-5; CR/PR Table III-3.

[59] *See* 19 U.S.C. § 1677(4)(B)(ii)(III).

[60] Hearing Tr. at 269 (Jacobs); Citepe's Foreign Producers'/Exporters' Questionnaire at II-8.

[61] Pursuant to Section 771(24) of the Tariff Act, imports from a subject country of merchandise corresponding to a domestic like product that account for less than 3 percent of all such merchandise imported into the United States during the most recent 12 months for which data are available preceding the filing of the petition shall be deemed negligible. 19 U.S.C. §§ 1671b(a), 1673b(a), 1677(24)(A)(i). The statute further provides that subject imports from a single country which comprise less than 3 percent of total such imports of the product may not be considered negligible if there are several countries subject to investigation with negligible imports and the sum of such imports from all those countries collectively accounts for more than 7 percent of the volume of all such merchandise imported into the United States. 19 U.S.C. § 1677(24)(A)(ii).

During September 2016 to August 2017, the 12-month period prior to the filing of the petitions, imports from each subject country exceeded the statutory negligibility threshold of 3 percent of total imports applicable to antidumping investigations. Based on questionnaire data, imports from Brazil accounted for *** percent, imports from Indonesia accounted for *** percent, imports from Korea accounted for *** percent, imports from Pakistan accounted for *** percent, and imports from Taiwan accounted for *** percent of total imports. CR/PR at Table IV-8. Because subject imports from each of

cumulate subject imports from all countries as to which petitions were filed and/or investigations self-initiated by Commerce on the same day, if such imports compete with each other and with the domestic like product in the U.S. market. In assessing whether subject imports compete with each other and with the domestic like product, the Commission generally has considered four factors:

(1) the degree of fungibility between subject imports from different countries and between subject imports and the domestic like product, including consideration of specific customer requirements and other quality related questions;

(2) the presence of sales or offers to sell in the same geographic markets of subject imports from different countries and the domestic like product;

(3) the existence of common or similar channels of distribution for subject imports from different countries and the domestic like product; and

(4) whether the subject imports are simultaneously present in the market.[62]

While no single factor is necessarily determinative, and the list of factors is not exclusive, these factors are intended to provide the Commission with a framework for determining whether the subject imports compete with each other and with the domestic like product.[63] Only a "reasonable overlap" of competition is required.[64]

Petitioners argue that PET resin is a fungible product that is produced to standard industry specifications and is highly interchangeable regardless of source.[65] Petitioners also argue that imports from each of the five subject countries compete with each other and with the domestic like product throughout the United States.[66] Petitioners also contend that subject

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the five subject countries exceeded the pertinent statutory negligibility threshold, we find that imports from each subject country are not negligible.

[62] *See Certain Cast-Iron Pipe Fittings from Brazil, the Republic of Korea, and Taiwan*, Inv. Nos. 731-TA-278-280 (Final), USITC Pub. 1845 (May 1986), *aff'd*, *Fundicao Tupy, S.A. v. United States*, 678 F. Supp. 898 (Ct. Int'l Trade), aff'd, 859 F.2d 915 (Fed. Cir. 1988).

[63] *See*, *e.g.*, *Wieland Werke, AG v. United State*s, 718 F. Supp. 50 (Ct. Int'l Trade 1989).

[64] The Statement of Administrative Action (SAA) to the Uruguay Round Agreements Act (URAA), expressly states that "the new section will not affect current Commission practice under which the statutory requirement is satisfied if there is a reasonable overlap of competition." H.R. Rep. No. 103-316, Vol. I at 848 (1994) (*citing Fundicao Tupy, S.A. v. United States*, 678 F. Supp. at 902; *see Goss Graphic Sys., Inc. v. United States*, 33 F. Supp. 2d 1082, 1087 (Ct. Int'l Trade 1998) ("cumulation does not require two products to be highly fungible"); *Wieland Werke, AG*, 718 F. Supp. at 52 ("Completely overlapping markets are not required.").

[65] Petitioners' Prehearing Brief at 11-12.

[66] Petitioners' Prehearing Brief at 12-13.

imports from each of the subject sources and the domestic product are sold to a substantial degree through end users.[67]

The statutory threshold for cumulation is satisfied in these investigations because Petitioners filed the antidumping and countervailing duty petitions with respect to all five subject countries on the same day, September 26, 2017.

Fungibility. The record in the final phase of these investigations indicates that PET resin is highly fungible, regardless of source. All responding U.S. producers and the vast majority of importers and purchasers, when comparing the domestic product with imports from individual subject sources or comparing imports from different subject sources, reported that PET resin from different sources is "always" or "frequently" interchangeable.[68] Additionally, all U.S. producers and most importers reported that factors other than price were "never" a significant factor in purchasing decisions, while most purchasers indicated that factors other than price were "sometimes" a significant factor.[69]

Channels of Distribution. During the POI, the *** majority of the domestic product (ranging from *** percent to *** percent) was sold to end users.[70] The *** majority of shipments of subject imports from four of the five subject countries were also sold to end users during of the POI.[71] For the remaining subject country, Taiwan, shipments of subject imports to end users remained relatively stable from 2015 (*** percent) to 2016 (*** percent) and increased substantially in 2017 (*** percent). The figure was *** percent in interim 2017 and *** percent in interim 2018.[72] Consequently, a substantial proportion of PET resin from both domestic sources and each subject country was sold to end users.

Geographic Overlap. All U.S. producers reported selling PET resin to all regions in the contiguous United States.[73] Importers from each subject country reported selling to the Pacific Coast and Southeast regions, with importers from Brazil and Korea selling to each of the regions.[74] Importers from four of the five subject countries reported selling to the Northeast

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[67] Petitioners' Prehearing Brief at 14.

[68] CR/PR at Table II-13.

[69] CR/PR at Table II-15. In comparing the domestic product with subject imports from Taiwan, a plurality of importers reported that factors other than price were "never" important in purchasing decisions. In all other comparisons of domestic and subject merchandise or between subject imports, a majority of importers reported that factors other than price were "never" important. *Id.*

[70] CR/PR at Table II-1.

[71] CR/PR at Table II-1. *** percent to *** percent of shipments of subject imports from Brazil were sold to end users; *** percent to *** percent of shipments of subject imports from Indonesia were sold to end users; *** percent to *** percent of shipments of subject imports from Korea were sold to end users; *** percent to *** percent of shipments of subject imports from Pakistan were sold to end users. *Id*.

[72] CR/PR at Table II-1.

[73] CR/PR at Table II-2.

[74] CR/PR at Table II-2. Importers from Indonesia sold to the Southeast, Mountain, and Pacific Coast regions; importers from Pakistan sold to the Northeast, Midwest, Southeast, and Pacific Coast regions; and importers from Taiwan sold to Northeast, Southeast, Mountain, and Pacific Coast regions. *Id*.

and Mountain regions.[75] With the exception of subject imports from Indonesia, imports from each subject country entered through all borders, and most of the subject imports, including those from Indonesia, entered through the east and west coasts.[76]

Simultaneous Presence in Market. Based on official U.S. import statistics, which may likely include out-of-scope merchandise, subject imports from all sources were present in the U.S. market throughout the POI.[77] Consequently, the domestic like product and imports from each subject country were simultaneously present in the U.S. market throughout the POI.

Conclusion. As the above discussion indicates, notwithstanding the mixed geographic presence of subject imports across the United States, the record supports a finding that imports from each subject country and the domestic like product are highly fungible, have substantial overlaps in channels of distribution, and are simultaneously present in the market to satisfy the reasonable overlap standard. Accordingly, we cumulate imports from all five subject countries for our analysis of material injury by reason of subject imports.

V. No Material Injury by Reason of Subject Imports

Based on the record in the final phase of these investigations, we find that an industry in the United States is not materially injured by reason of imports of PET resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan that Commerce has found to be sold in the United States at less than fair value.

A. Legal Standards

In the final phase of antidumping and countervailing duty investigations, the Commission determines whether an industry in the United States is materially injured or threatened with material injury by reason of the imports under investigation.[78] In making this determination, the Commission must consider the volume of subject imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic like product, but only in the context of U.S. production operations.[79] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[80] In

[75] CR/PR at Table II-2.

[76] CR/PR at Table IV-10. The vast majority of imports from Brazil and Pakistan entered through east coast borders while the majority of imports from Indonesia, Korea, and Taiwan entered through the west coast borders. *Id*. Imports from Indonesia did not enter through the northern and southern borders. *Id*.

[77] CR/PR at Table VI-11.

[78] 19 U.S.C. §§ 1671d(b), 1673d(b). The Trade Preferences Extension Act of 2015, Pub. L. 114-27, amended the provisions of the Tariff Act pertaining to Commission determinations of material injury and threat of material injury by reason of subject imports in certain respects.

[79] 19 U.S.C. § 1677(7)(B). The Commission "may consider such other economic factors as are relevant to the determination" but shall "identify each {such} factor ... and explain in full its relevance to the determination." 19 U.S.C. § 1677(7)(B).

[80] 19 U.S.C. § 1677(7)(A).

assessing whether the domestic industry is materially injured by reason of subject imports, we consider all relevant economic factors that bear on the state of the industry in the United States.[81] No single factor is dispositive, and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[82]

Although the statute requires the Commission to determine whether the domestic industry is "materially injured or threatened with material injury by reason of" unfairly traded imports,[83] it does not define the phrase "by reason of," indicating that this aspect of the injury analysis is left to the Commission's reasonable exercise of its discretion.[84] In identifying a causal link, if any, between subject imports and material injury to the domestic industry, the Commission examines the facts of record that relate to the significance of the volume and price effects of the subject imports and any impact of those imports on the condition of the domestic industry. This evaluation under the "by reason of" standard must ensure that subject imports are more than a minimal or tangential cause of injury and that there is a sufficient causal, not merely a temporal, nexus between subject imports and material injury.[85]

In many investigations, there are other economic factors at work, some or all of which may also be having adverse effects on the domestic industry. Such economic factors might include nonsubject imports; changes in technology, demand, or consumer tastes; competition among domestic producers; or management decisions by domestic producers. The legislative history explains that the Commission must examine factors other than subject imports to ensure that it is not attributing injury from other factors to the subject imports, thereby inflating an otherwise tangential cause of injury into one that satisfies the statutory material injury threshold.[86] In performing its examination, however, the Commission need not isolate

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[81] 19 U.S.C. § 1677(7)(C)(iii).

[82] 19 U.S.C. § 1677(7)(C)(iii).

[83] 19 U.S.C. §§ 1671d(a), 1673d(a).

[84] *Angus Chemical Co. v. United States*, 140 F.3d 1478, 1484-85 (Fed. Cir. 1998) ("{T}he statute does not 'compel the commissioners' to employ {a particular methodology}."), *aff'g,* 944 F. Supp. 943, 951 (Ct. Int'l Trade 1996).

[85] The Federal Circuit, in addressing the causation standard of the statute, observed that "{a}s long as its effects are not merely incidental, tangential, or trivial, the foreign product sold at less than fair value meets the causation requirement." *Nippon Steel Corp. v. USITC*, 345 F.3d 1379, 1384 (Fed. Cir. 2003). This was further ratified in *Mittal Steel Point Lisas Ltd. v. United States*, 542 F.3d 867, 873 (Fed. Cir. 2008), where the Federal Circuit, quoting *Gerald Metals, Inc. v. United States*, 132 F.3d 716, 722 (Fed. Cir. 1997), stated that "this court requires evidence in the record 'to show that the harm occurred "by reason of" the LTFV imports, not by reason of a minimal or tangential contribution to material harm caused by LTFV goods.'" *See also Nippon Steel Corp. v. United States*, 458 F.3d 1345, 1357 (Fed. Cir. 2006); *Taiwan Semiconductor Industry Ass'n v. USITC*, 266 F.3d 1339, 1345 (Fed. Cir. 2001).

[86] SAA at 851-52 ("{T}he Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports."); S. Rep. 96-249 at 75 (1979) (the Commission "will consider information which indicates that harm is caused by factors other than less-than-fair-value imports."); H.R. Rep. 96-317 at 47 (1979) ("in examining the overall injury being experienced by a domestic industry, the ITC will take into account evidence presented to it which demonstrates that the harm attributed by the petitioner to the subsidized or dumped imports is

the injury caused by other factors from injury caused by unfairly traded imports.[87] Nor does the "by reason of" standard require that unfairly traded imports be the "principal" cause of injury or contemplate that injury from unfairly traded imports be weighed against other factors, such as nonsubject imports, which may be contributing to overall injury to an industry.[88] It is clear that the existence of injury caused by other factors does not compel a negative determination.[89]

Assessment of whether material injury to the domestic industry is "by reason of" subject imports "does not require the Commission to address the causation issue in any particular way" as long as "the injury to the domestic industry can reasonably be attributed to the subject imports" and the Commission "ensure{s} that it is not attributing injury from other sources to

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attributable to such other factors;" those factors include "the volume and prices of nonsubsidized imports or imports sold at fair value, contraction in demand or changes in patterns of consumption, trade restrictive practices of and competition between the foreign and domestic producers, developments in technology and the export performance and productivity of the domestic industry"); *accord Mittal Steel*, 542 F.3d at 877.

[87] SAA at 851-52 ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports."); *Taiwan Semiconductor Industry Ass'n,* 266 F.3d at 1345 ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports .... Rather, the Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports." (emphasis in original)); *Asociacion de Productores de Salmon y Trucha de Chile AG v. United States*, 180 F. Supp. 2d 1360, 1375 (Ct. Int'l Trade 2002) ("{t}he Commission is not required to isolate the effects of subject imports from other factors contributing to injury" or make "bright-line distinctions" between the effects of subject imports and other causes.); *see also Softwood Lumber from Canada*, Inv. Nos. 701-TA-414 and 731-TA-928 (Remand), USITC Pub. 3658 at 100-01 (Dec. 2003) (Commission recognized that "{i}f an alleged other factor is found not to have or threaten to have injurious effects to the domestic industry, *i.e*., it is not an 'other causal factor,' then there is nothing to further examine regarding attribution to injury"), *citing Gerald Metals,* 132 F.3d at 722 (the statute "does not suggest that an importer of LTFV goods can escape countervailing duties by finding some tangential or minor cause unrelated to the LTFV goods that contributed to the harmful effects on domestic market prices.").

[88] S. Rep. 96-249 at 74-75; H.R. Rep. 96-317 at 47.

[89] *See Nippon Steel Corp*., 345 F.3d at 1381 ("an affirmative material-injury determination under the statute requires no more than a substantial-factor showing. That is, the 'dumping' need not be the sole or principal cause of injury.").

the subject imports."[90] Indeed, the Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[91]

The Federal Circuit's decisions in *Gerald Metals, Bratsk*, and *Mittal Steel* all involved cases where the relevant "other factor" was the presence in the market of significant volumes of price-competitive nonsubject imports. The Commission interpreted the Federal Circuit's guidance in *Bratsk* as requiring it to apply a particular additional methodology following its finding of material injury in cases involving commodity products and a significant market presence of price-competitive nonsubject imports.[92] The additional "replacement/benefit" test looked at whether nonsubject imports might have replaced subject imports without any benefit to the U.S. industry. The Commission applied that specific additional test in subsequent cases, including the *Carbon and Certain Alloy Steel Wire Rod from Trinidad and Tobago* determination that underlies the *Mittal Steel* litigation.

Mittal Steel clarifies that the Commission's interpretation of *Bratsk* was too rigid and makes clear that the Federal Circuit does not require the Commission to apply an additional test nor any one specific methodology; instead, the court requires the Commission to have "evidence in the record" to "show that the harm occurred 'by reason of' the LTFV imports," and requires that the Commission not attribute injury from nonsubject imports or other factors to subject imports.[93] Accordingly, we do not consider ourselves required to apply the replacement/benefit test that was included in Commission opinions subsequent to *Bratsk*.

The progression of *Gerald Metals, Bratsk*, and *Mittal Steel* clarifies that, in cases involving commodity products where price-competitive nonsubject imports are a significant factor in the U.S. market, the Court will require the Commission to give full consideration, with adequate explanation, to non-attribution issues when it performs its causation analysis.[94]

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[90] *Mittal Steel*, 542 F.3d at 877-78; *see also id.* at 873 ("While the Commission may not enter an affirmative determination unless it finds that a domestic industry is materially injured 'by reason of' subject imports, the Commission is not required to follow a single methodology for making that determination ... {and has} broad discretion with respect to its choice of methodology.") *citing United States Steel Group v. United States*, 96 F.3d 1352, 1362 (Fed. Cir. 1996) and S. Rep. 96-249 at 75. In its decision in *Swiff-Train v. United States*, 793 F.3d 1355 (Fed. Cir. 2015), the Federal Circuit affirmed the Commission's causation analysis as comporting with the Court's guidance in *Mittal*.

[91] *Nucor Corp. v. United States*, 414 F.3d 1331, 1336, 1341 (Fed. Cir. 2005); *see also Mittal Steel*, 542 F.3d at 879 ("*Bratsk* did not read into the antidumping statute a Procrustean formula for determining whether a domestic injury was 'by reason' of subject imports.").

[92] *Mittal Steel*, 542 F.3d at 875-79.

[93] *Mittal Steel*, 542 F.3d at 873 (quoting from *Gerald Metals*, 132 F.3d at 722), 875-79 & n.2 (recognizing the Commission's alternative interpretation of *Bratsk* as a reminder to conduct a non-attribution analysis).

[94] To that end, after the Federal Circuit issued its decision in *Bratsk*, the Commission began to present published information or send out information requests in the final phase of investigations to producers in nonsubject countries that accounted for substantial shares of U.S. imports of subject merchandise (if, in fact, there were large nonsubject import suppliers). In order to provide a more complete record for the Commission's causation analysis, these requests typically seek information on capacity, production, and shipments of the product under investigation in the major source countries that export to the United States. The Commission plans to continue utilizing published or requested

The question of whether the material injury threshold for subject imports is satisfied notwithstanding any injury from other factors is factual, subject to review under the substantial evidence standard.[95] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[96]

B. Conditions of Competition and the Business Cycle

The following conditions of competition inform our analysis of whether there is material injury by reason of subject imports.

1. Demand Considerations

U.S. demand for PET resin is a function of the demand for U.S.-produced downstream products. Reported end uses for PET resin include beverage bottles, sheets, carpets, strapping, and thermoformed plastic containers. PET resin also accounted for a large share of the cost of the intermediate products in which it is used, but a smaller share of the ultimate end-use products.[97]

All U.S. producers and the vast majority of U.S. importers and purchasers reported that U.S. demand for PET resin increased from 2015 to 2017 and has continued to increase since 2017.[98] Both Petitioners and Respondents agree that demand, as measured by apparent U.S. consumption, grew over the POI.[99]

Apparent U.S. consumption for PET resin increased from 6.3 billion pounds in 2015 to 6.9 billion pounds in 2016, and then to 7.0 billion pounds in 2017; apparent U.S. consumption remained relatively level between interim 2017 and interim 2018, at 1.7 billion pounds.[100]

2. Supply Considerations

The domestic industry, subject imports, and nonsubject imports supplied the U.S. market during the POI.[101] During most of the POI, the domestic industry consisted of DAK,

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information in the final phase of investigations in which there are substantial levels of nonsubject imports.

[95] We provide in our discussion below a full analysis of other factors alleged to have caused any material injury experienced by the domestic industry.

[96] *Mittal Steel*, 542 F.3d at 873; *Nippon Steel Corp*., 458 F.3d at 1350, *citing U.S. Steel Group*, 96 F.3d at 1357; S. Rep. 96-249 at 75 ("The determination of the ITC with respect to causation is ... complex and difficult, and is a matter for the judgment of the ITC.").

[97] CR at II-17 to 18, PR at II-9.

[98] CR/PR at Tables II-5 to 6.

[99] Petitioners' Prehearing Brief at 14-15; iResin's Prehearing Brief at 17; Niagara's Prehearing Brief at 8.

[100] CR/PR at Table IV-12.

[101] CR/PR at Tables IV-13 and C-1.

Indorama, M&G USA, and Nan Ya.[102] The domestic industry was by far the largest source of supply to the U.S. market and all four of the U.S. producers are part of multinational operations with foreign affiliates located in Asia, Europe, and South America.[103]

As previously noted, in October 2017 M&G USA and its Italy-based parent company, M&G Group, filed for bankruptcy in their respective jurisdictions.[104] As a result of these bankruptcy proceedings, M&G USA shut down its domestic production facility in West Virginia and the group's assets in the United States and abroad were acquired by competitors.[105] The record also shows that 19 of 25 responding U.S. purchasers reported supply constraints. Most (10) of these purchasers reported that the M&G bankruptcy caused supply disruptions, and most (13) also reported that domestic suppliers generally were unable to provide the requested PET resin, refused to bid on business, or provided short shipments. As a result, some purchasers reported that they were placed on allocation from domestic producers.[106]

The domestic industry's total capacity remained level at 6.9 billion from 2015 to 2016 and declined slightly to 6.8 billion in 2017; total capacity was 1.7 billion in interim 2017 and 1.6 billion in interim 2018.[107] Petitioners assert that the PET resin industry is highly capital-intensive.[108] The domestic industry's market share decreased from 84.9 percent in 2015 to 79.5 percent in 2016, and then increased to 80.9 percent in 2017; its market share was 76.3 percent in interim 2017 and 81.1 percent in interim 2018.[109] The record further indicates that the domestic industry imported substantial volumes of subject and nonsubject imports during the POI, for a total of *** percent of apparent U.S. consumption in 2015, *** percent in 2016, and *** percent in 2017.[110]

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[102] CR/PR at Table III-1. In 2017, DAK had the *** share of domestic production at *** percent, following by *** and ***. *Id*.

[103] CR/PR at Tables III-2 and IV-12.

[104] CR at III-11, PR at III-7.

[105] CR at III-11 to 13, PR at III-7 to 8. M&G USA's Apple Grove, West Virginia's facility was acquired by Taiwan-based producer Far Eastern and operations restarted in ***. M&G Brazil was acquired by Indorama Ventures, the Thai parent company of Indorama. As of the closing of this record on October 5, 2018 M&G USA's Corpus Christi development was in the process of being acquired by a joint venture comprised of Alpek (parent of U.S. producer DAK), Indorama Ventures, and Far Eastern, pending approval by the Federal Trade Commission. CR at III-12 to 13, PR at III-7 to 8; Petitioners' Posthearing Brief, Answers to Commissioners Questions at 29-30.

[106] CR at II-13 to 14, PR at II-7.

[107] CR/PR at Tables III-5 and C-1. The decline in the domestic industry's capacity was primarily due to the closure of M&G USA's Apple Grove, WV facility in October 2017.

[108] Petitioners' Prehearing Brief at 16.

[109] CR/PR at Table IV-13.

[110] CR/PR at Table IV-3. The absolute volume of subject imports by U.S. producers was *** pounds in 2015, *** pounds in 2016, and *** pounds in 2017, and these imports' share of apparent U.S. consumption increased from *** percent in 2015 to *** percent in 2016 and *** percent in 2017. The absolute volume of nonsubject imports by U.S. producers was *** pounds in 2015, *** pounds in 2016, and *** pounds in 2017, and these imports' share of apparent U.S. consumption increased from *** percent in 2015 to *** percent in 2016 and declined to *** percent in 2017. *Id*.

Cumulated subject imports increased their market share during the full years in the POI and were the second largest supplier after the domestic industry in 2017. Subject imports' market share increased from 4.2 percent in 2015 to 10.0 percent in 2016, and then to 11.9 percent in 2017; their market share was 12.5 percent in interim 2017 and 6.8 percent in interim 2018.[111]

Nonsubject imports' U.S. market share declined marginally from 10.9 percent in 2015 to 10.5 percent in 2016, and then to 7.2 percent in 2017; their market share was 11.2 percent in interim 2017 and 12.1 percent in interim 2018.[112] Mexico was the largest single source of nonsubject imports in the U.S. market throughout the POI.[113] *** PET resin production capacity in Mexico is under common ownership with ***.[114] The market share of nonsubject imports from sources other than Mexico declined in every full year of the POI.[115] As indicated earlier, nonsubject imports from Canada, China, India, and Oman were the subject of U.S. antidumping and countervailing duty investigations in 2015, resulting in duties being imposed on imports from these sources in 2016.[116]

3. Substitutability and Other Conditions

The record indicates a high degree of substitutability between the domestic like product and subject imports.[117] As described above, all responding U.S. producers and the vast majority of importers and purchasers, when comparing the domestic product with imports from individual subject sources or comparing imports from different subject sources, reported that PET resin from different sources is "always" or "frequently" interchangeable.[118] The record also indicates that price is an important purchasing factor. All U.S. producers and the majority of U.S. importers reported that differences other than price were "never" significant when comparing the domestic like product and subject imports from each source, with the exception of subject imports from Taiwan.[119] All U.S. purchasers reported that differences other than

[111] CR/PR at Table IV-13.

[112] CR/PR at Table IV-13.

[113] CR/PR at Table IV-13. Their market share increased from *** percent in 2015 to *** percent in 2016 and declined to *** percent in 2017; its market share was *** percent in interim 2017 and *** percent in interim 2018. *Id*.

[114] CR/PR at Table VII-29.

[115] The market share of nonsubject imports from Canada declined from *** percent in 2015 to *** percent in 2016, and then to *** percent in 2017; their market share was *** percent in interim 2017 and *** percent in interim 2018. The market share of nonsubject imports from sources other than Mexico and Canada declined from *** percent in 2015 to *** percent in 2016, and then to *** percent in 2017; their market share was *** percent in interim 2017 and *** percent in interim 2018. CR/PR at Table IV-13.

[116] CR at I-8, PR at I-6; 81 Fed. Reg. 27977, 27979 (May 6, 2016).

[117] CR at II-21, PR at II-12.

[118] CR/PR at Table II-13.

[119] CR/PR at Table II-15. Three U.S. importers reported that differences other than price were either "never" or "sometimes" significant when comparing the domestic like product and subject imports from Taiwan, while two U.S. importers also reported that the differences other than price were

price were "sometimes" significant when comparing the domestic like product and subject imports from each source, with the exception of subject imports from Brazil.[120]

The two main raw material inputs, purified terephthalic acid ("PTA") and monoethylene glycol ("MEG"), historically account for over 75 percent of the cost of producing PET resin,[121] and together accounted for more than *** percent of reported raw material costs in 2017.[122] As a share of the cost of goods sold ("COGS"), the cost of raw materials remained relatively stable at *** percent during the POI.[123] Prices for both PTA and MEG declined from 2015 to the first quarter of 2016, increased relatively smoothly in 2016, and then spiked in the first quarter of 2017.[124]

Questionnaire data indicate that the majority (*** percent) of domestic producers' U.S. commercial shipments were through long-term contracts, while the majority (*** percent) of importers' U.S. commercial shipments were spot sales.[125] Petitioners report that their contract prices have built-in formulas that account for monthly fluctuations in the cost of MEG and PTA, while Respondents claim that their spot sales are more responsive to changing market conditions such as movements in raw material costs.[126]

C. Volume of Subject Imports

Section 771(7)(C)(i) of the Tariff Act provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."[127]

The absolute volume of cumulated subject imports increased over the POI. Cumulated subject import volume rose from 302 million pounds in 2015 to 734 million pounds in 2016, and to 856 million pounds in 2017; the volume was 233 million pounds in interim 2017 and 71 million pounds in interim 2018. Consequently, the volume increased by 143 percent from 2015

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either "always" or "frequently" significant. *Id*. Twenty-two out of 25 U.S. purchasers also reported that price is a "very important" purchasing factor, and the remaining three reported that price is a "somewhat important" factor. CR/PR at Table II-9.

[120] CR/PR at Table II-15. A plurality of U.S. purchasers (seven) reported that differences other than price were "sometimes" significant when comparing the domestic like product and subject imports from Brazil. *Id*.

[121] CR/PR at V-1. We observe that isophthalic acid ("IPA") represents a small share (an estimated *** percent) of the cost of PET resin. *Id*.; Petitioners' Posthearing Brief, Exh. 2 at confidential slide 39.

[122] CR/PR at Table VI-4.

[123] CR/PR at Table VI-1. Raw materials as a share of COGS was *** percent in 2015, *** percent in 2016, and *** percent in 2017; the ratio was *** percent in interim 2017 and *** percent in interim 2018. *Id*.

[124] CR/PR at V-1, Figure V-1. MEG and PTA prices increased overall by *** percent and *** percent, respectively from January 2015 to June 2018. *Id*.

[125] CR/PR at Table V-2. The vast majority (*** percent) of imports by U.S. producers, reported only by ***, is based on long-term contracts. *Id*.

[126] CR at V-4, PR at V-2 to 3; Hearing Tr. at 37 (Cullen); Petitioners' Prehearing Brief at 21; iResin's Prehearing Brief at 17; Niagara's Prehearing Brief at 22-23.

[127] 19 U.S.C. § 1677(7)(C)(i).

to 2016 and by 16.6 percent from 2016 to 2017, with an overall increase of 183.5 percent from 2015 to 2017; cumulated subject import volume was 69.6 percent lower in interim 2018 than in interim 2017.[128]

The market share of cumulated subject imports also increased over the POI. It rose from 4.2 percent in 2015 to 10.0 percent in 2016, and then to 11.9 percent in 2017; the market share was 12.5 percent in interim 2017 and 6.8 percent in interim 2018.[129]

Accordingly, we find that the volume of cumulated subject imports and the increase in that volume are significant both in absolute terms and relative to consumption in the United States.[130]

D. Price Effects of the Subject Imports

Section 771(7)(C)(ii) of the Tariff Act provides that, in evaluating the price effects of the subject imports, the Commission shall consider whether

> (I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and
>
> (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.[131]

As stated above, the record indicates a high degree of substitutability between subject imports and the domestic like product and that price is an important consideration in purchasing decisions.[132]

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. sales values on four pricing products shipped to unrelated U.S. customers during the POI.[133] All four U.S. producers and eight importers provided usable

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[128] CR/PR at Table IV-2. We observe that the lower volume of subject imports in interim 2018 compared to interim 2017 was likely due at least in part to the pendency of these investigations. Petitioners' Prehearing Brief at 50-51.

[129] CR/PR at Table IV-13.

[130] As observed above, the domestic industry imported substantial and increasing volumes of subject imports during the POI from *** pounds in 2015 to *** pounds in 2016 and *** pounds in 2017, reflecting a *** percent increase from 2015 to 2016 and *** percent increase from 2016 to 2017. Calculated from CR/PR at Table IV-3. The ratio of apparent U.S. consumption of these imports by domestic producers to apparent U.S. consumption increased from *** percent in 2015 to *** percent in 2016 and *** percent in 2017. *Id*. *** imported the largest volume of subject merchandise among the domestic producers. *See* CR/PR at Table III-9.

[131] 19 U.S.C. § 1677(7)(C)(ii).

[132] CR/PR at Tables II-9, II-13, II-15.

[133] CR at V-8, PR at V-5. The pricing products are as follows:

pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[134] The pricing data account for the vast majority (*** percent) of U.S. producers' shipments of PET resin, all U.S. shipments of subject imports from Brazil, *** percent of U.S. shipments of subject imports from Indonesia, the vast majority (*** percent) of U.S. shipments of subject imports from Korea, the majority (55.4 percent) of U.S. shipments of subject imports from Pakistan, and the vast majority (87.7 percent) of U.S. shipments of subject imports from Taiwan in 2017.[135] [136]

The record indicates that subject imports were priced above the domestic product in most quarterly price comparison instances accounting for the largest volume of subject import pricing data during the POI. The subject imports oversold the comparable domestic product in 106 of 156 quarterly price comparisons (895 million pounds) by an average margin of 8.1 percent and undersold the domestic product in the remaining 50 quarterly price comparisons (394 million pounds) by an average margin of 5.8 percent.[137] Overall, overselling by the subject imports occurred in 68 percent of comparisons, accounting for 69 percent of the quantity of subject import pricing data. Underselling by the subject imports was most frequent in 2015, whereas overselling predominated in 2016 and 2017 in both the numbers of comparisons and

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Product 1 – PET resin, being either clear homo- or co-polymer, and having an intrinsic viscosity of 0.72 IV to 0.84 IV, in the solid stated form. This PET resin product is typically used in water bottle applications;

Product 2 – PET resin, being either clear homo- or co-polymer, and having an intrinsic viscosity of 0.72 IV to 0.84 IV, in the solid stated form. This PET resin product is typically used in sheet and strapping;

Product 3 – PET resin, being either clear homo- or co-polymer, and having an intrinsic viscosity of 0.78 IV to 0.86 IV, in the solid stated form. This PET resin product is typically used in carbonated soft drink applications; and

Product 4 – PET resin, being either clear homo- or co-polymer, and having an intrinsic viscosity of 0.75 IV to 0.86 IV, in the solid stated form. This PET resin product is typically used in heat set or hot fill applications; food, household, and other products.

[134] CR at V-9, PR at V-6.

[135] CR at V-9, PR at V-6.

[136] Petitioners requested that *** pricing data be included as part of the product pricing comparison dataset. Petitioners' Prehearing Brief at 29; Hearing Tr. at 49 (Rosenthal). However, we find that pricing data provided by *** is not comparable and thus not appropriate to include as part of the product pricing dataset. *** reported that it was "unable to answer the questionnaire with respect to price data" because it does not distinguish among the four pricing product categories. *** U.S. Importer Questionnaire at III-2r. Furthermore, *** does not appear to engage in arm's length transactions because it imports products and transfers to affiliates with a markup so firms can "maximize drawback recovery on exports." It is unclear the markup that *** charges because its reported commercial shipments values are less than the value that it imports. *See generally* *** U.S. Importer Questionnaire; CR at V-9 n.19, PR at V-6 n.19.

[137] CR/PR at Table V-10.

quantities.[138] [139] Furthermore, with the exception of Product 3 (the smallest volume pricing product for subject imports), overselling predominated for all pricing products.[140]

In addition to price data, the Commission collected landed duty-paid values and quantities for imports used for internal consumption, i.e., direct imports. Two importers (***) reported direct import data for Product 1 only.[141] We therefore considered direct import data

[138] *See generally* CR/PR at Tables V-3 to 6.

[139] Petitioners argue that *** reported price data on subject imports from Taiwan and Pakistan for certain periods during the POI are overstated when compared to the AUVs for commercial shipments. Petitioners' Posthearing Brief, Answers to Commissioners Questions at 9. Specifically, Petitioners argue that the reported quantity and value of the price data for subject imports from Taiwan in 2015, 2016, and interim 2018 significantly exceeded the commercial shipments data; and the reported quantity and value of the price data for subject imports from Pakistan in interim 2017 significantly exceeded the commercial shipments data. Petitioners' Posthearing Brief, Answers to Commissioners Questions at 9-10. As an initial matter, as acknowledged by Petitioners, AUVs for commercial shipments are not always a reliable indicator of price due to possible product mix issues. Petitioners stated that the Commission should not replace the traditional price comparison analysis with comparisons of AUVs. Petitioners' Posthearing Brief, Answers to Commissioners Questions at 8. Nonetheless, we observe that the data provided by Petitioners with respect to the subject imports from Pakistan do not reflect the latest information in the record. In fact, the reported quantity and values for both commercial shipments and price data are nearly identical, except for rounding. *See* *** U.S. Importers' Questionnaire at II-8a, III-2d (indicating that in interim 2017, the quantity of sales for the price data in interim 2017 is *** pounds and the commercial shipments quantity is *** pounds; the aggregate value for the price data is $*** and the commercial shipment values is $***). With respect to the data issue relating to the subject imports from Taiwan, we observe that *** reported import quantity from Taiwan is less than its reported sales quantity for the pricing data in 2015 (by 87.5 percent), 2016 (by 96.8 percent), and interim 2018 (by 65.6 percent). However, Taiwan was the smallest import source for ***. *See* *** U.S. Importers' Questionnaire at II-II-5b to 9b, III-2e. Assuming that *** price data for Taiwan are unreliable, if *** data is removed from comparisons of quarterly prices for Taiwan, cumulated subject imports still oversold in *** instances (*** pounds) by an average margin of *** percent and undersold in the remaining *** instances (*** pounds) by an average margin of *** percent. Extrapolated from *** U.S. Importers' Questionnaire and CR/PR at Table V-10. Therefore, these possible data issues do not significantly affect our underselling analysis or alter our conclusion.

Petitioners also argue that *** quarterly pricing data are significantly overstated when compared to the company's AUVs for commercial shipments. Petitioners' Posthearing Brief, Answers to Commissioners Questions at 10. However, we observe that the commercial shipments data provided by Petitioners do not reflect the latest information in the record. Specifically, the AUVs of *** commercial shipments for 2015, 2016, and 2017 are $***, $***, and ***, respectively, as compared to $***, $***, and $*** provided by Petitioners. *Compare* Petitioners' Posthearing Brief, Answers to Commissioners Questions at 10, *and* *** U.S. Importers' Questionnaire. With the accurate figures, the differences between the AUVs for commercial shipments and price data are minor.

[140] CR/PR at Table V-10.

[141] CR at V-19, PR at V-7. While *** reported purchase cost data for Product 3, it operates solely as a trading company and is not a direct importer that obtains merchandise for its own internal consumption. CR at V-19 n.24, PR at V-7 n.24. Furthermore, as indicated above, the company was

provided for Product 1. While these data indicate that direct imports of Product 1 are generally valued lower than that of pricing data for domestic Product 1,[142] the volume of such imports is small relative to the total volume of subject imports and not nearly equivalent to the volume of commercially sold subject imports that oversold the domestic product. Therefore, the lower cost of direct imports does not outweigh the overselling evident in our traditional pricing data.[143]

We have also considered the lost sales claimed by the domestic industry that were due to price competition from subject imports. In response to a question of whether purchasers had purchased subject imports instead of the domestic like product during the POI, the Commission received responses from 25 purchasers accounting for more than *** pounds of PET resin purchases from 2015 to 2017.[144] We note that purchaser responses provide a comprehensive coverage of the entire U.S. market for that period.[145] Nineteen of the 25 responding purchasers reported that they purchased subject imports instead of the domestic product during the POI.[146] However, only four of those 19 purchasers reported that the lower price of subject imports was a primary factor in purchasing decisions, with these purchases accounting for a total of *** pounds of subject imports.[147] This volume of subject imports

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unable to identify precisely the product type that it imports. Therefore, we do not find it appropriate to take into account *** data, i.e., any Product 3 purchase cost data, in our analysis.

[142] We observe that Product 1 direct imports were valued lower than the pricing data for domestic product in 21 quarterly comparisons (217 million pounds) by an average difference of 6.8 percent, while it was valued higher than the domestic product in six quarterly comparisons (59 million pounds) by an average difference of 8.6 percent. Calculations from CR/PR at Table V-7.

[143] Moreover, we recognize that direct import purchase cost data and U.S. producer pricing data may not be directly comparable because the direct import purchase cost data do not necessarily capture the total cost associated with importing; thus, direct import data may understate the total cost to the purchaser. *See Tool Chests and Cabinets from China*, Inv. No. 701-TA-575 (Final), USITC Pub. 4753 (January 2018) at 28 n.149; *Silicon Metal from Australia, Brazil, Kazakhstan, and Norway*, Inv. Nos. 701-TA-567-569 and 731-TA-1343-1345 (Final), USITC Pub. 4773 (April 2018) at 25 n.144. ***, which accounted for most of the quantity of direct import purchase cost data, provided estimates of the costs above landed duty-paid value associated with its importing activities. *** estimated that inventory carrying costs were *** percent of landed duty-paid value, while other costs ranged from *** percent of the landed, duty-paid value. CR at V-20, PR at V-8. We find that the additional costs associated with direct imports narrow the difference between its lower-cost direct imports and domestic prices. *See* CR/PR at Table V-7; CR V-20, PR at V-8.

[144] CR/PR at Table V-11.

[145] *Compare* CR/PR at Table V-11, *with* CR/PR at Table IV-12.

[146] CR/PR at Table V-12.

[147] CR/PR at Table V-12. This volume excludes the volume of ***. This volume also excludes the volume reported by ***, which indicated that while it did purchase *** pounds of subject imports instead of the domestic like product during the POI, this product was not priced lower than the domestic like product and price was not a primary reason for its purchase of subject imports. One of the four purchasers reporting that price was a primary reason in their decision to purchase subject imports instead of the domestic like product, ***, did not provide a quantity purchased for this reason.

reportedly purchased due to price was equivalent to only *** percent of subject imports and *** percent of apparent U.S. consumption over the POI.[148] In light of the fact that these 25 responding purchasers accounted for a significant portion of apparent U.S. consumption but reported that only a small volume of subject imports was purchased instead of the domestic product due to price, we find that confirmed lost sales data do not support a finding of significant underselling of the domestic product by subject imports.[149] [150]

Accordingly, given the prevalence of the overselling by subject imports during the POI, and the relatively small volumes of lower valued direct imports and confirmed lost sales, we do not find that there was significant price underselling by subject merchandise.

We have also examined price trends for the domestic like product. Between the first quarter of 2015 and the first quarter of 2018, domestic prices for Products 1, 2, and 4 increased by *** percent, while domestic prices for Product 3 remained relatively unchanged, increasing by *** percent.[151] Domestic prices for each of the four pricing products all increased in the first two quarters of 2015, declined in the following quarters into 2016, and increased in 2017 into the first quarter of 2018 at levels higher than or equal to the beginning of the POI.[152]

However, *** also reported "no" in response to the question of whether subject imports were priced lower than the domestic product. *Id*.

[148] CR/PR at Table C-1 and Table V-12. In addition, none of the four purchasers reporting that the lower price of subject imports was a factor in their purchasing decisions also reported reducing their share of purchases from domestic sources over the POI. CR/PR at Table V-11 and 12. For example, ***, which accounted for the large majority of the volume of subject imports that were reportedly purchased due to their lower price, also reported increasing its share of total purchases from domestic sources over the POI. *Id*.

[149] By contrast, fourteen purchasers reported factors such as limited availability, supply shortages, and U.S. producers' own decisions to import merchandise as reasons for their purchases of subject imports instead of domestic product over the POI. CR/PR at Table V-12. Petitioners were also requested to submit contemporaneous support for allegations of instances in which sales were lost or prices reduced during 2015-2016. While some supporting documentation was reported, this information did not directly cite to competition with the subject imports. Petitioners' Posthearing Brief, Answers to Commissioners Questions at 18 (citing generally to "most competitive offers", "expectations", "global position", or "Asia/Middle East suppliers").

[150] In comparing domestic and subject imported PET resin across numerous attributes, more purchasers reported that subject imports were lower priced than domestic PET resin than reported the opposite. CR/PR at Table II-11. However, the number of responding purchasers for each country comparison was relatively small (from 4 to 11) compared to the total number of responding purchasers (25). *Id*. While we have considered this information, we do not believe it outweighs the actual price data we have collected that show that subject imports are typically higher priced.

[151] CR/PR at Table V-9.

[152] CR/PR at Table V-3 to 6. Product 1 prices increased from *** dollars per pound in the first quarter of 2015 to *** dollars per pound in the second quarter and declined to a period-low of *** dollars per pound in the first through third quarters of 2016 and increased irregularly to *** dollars per pound in the first quarter of 2018; Product 2 prices increased from *** dollars per pound in the first quarter of 2015 to *** dollars per pound in the second quarter and declined to a period-low of *** dollars per pound in the first quarter of 2016 and increased irregularly to *** dollars per pound in the

We observe that unit raw material costs similarly declined from 2015 to reach a low in 2016 and subsequently increased in 2017 and into 2018 to levels higher than in 2015.[153] Indeed, during the POI the domestic industry's average unit values ("AUV") for total net sales and raw material costs tracked each other nearly identically.[154] Therefore, the correlation between prices and AUVs for the domestic like product and raw material costs seems to be a function of the main raw material inputs being an indexed component in the sales price for the domestic like product.[155] Because domestic prices generally increased overall during the POI and any of the declines in the beginning of the POI appear to be the result of declines in raw material costs, we do not find that subject imports depressed prices for the domestic like product to a significant degree.[156] [157]

We have also examined whether subject imports prevented price increases for the domestic like product that otherwise would have occurred. We observe that the COGS to net sales ratio fluctuated within a range of *** percentage points during 2015-2017. The ratio declined slightly from *** percent in 2015 to *** percent in 2016 and increased slightly to *** percent in 2017; the ratio was *** percent and *** percent in interim 2017 and interim 2018,

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first quarter of 2018; Product 3 prices increased from *** dollars per pound in the first quarter of 2015 to *** dollars per pound in the second quarter and declined to a period-low of *** dollars per pound in the third and fourth quarters of 2016 and increased irregularly to *** dollars per pound in the first quarter of 2018; Product 4 prices increased from *** dollars per pound in the first quarter of 2015 to *** dollars per pound in the second quarter and declined to a period-low of *** dollars per pound in the first quarter of 2016 and increased irregularly to *** dollars per pound in the first quarter of 2018. CR/PR at Tables V-3 to 6.

[153] CR/PR at Table VI-1. Unit raw material costs declined from *** dollars per pound in 2015 to *** dollars per pound in 2016 and subsequently increased to *** in 2017; and the unit costs were *** dollars per pound and *** dollars per pound in interim 2017 and interim 2018, respectively. *Id*.

[154] The net sales AUV declined by *** dollars per pound in 2015-2016 and increased by *** per pound in 2016-2017; and the net sales AUV in interim 2018 was *** dollars per pound higher than interim 2017. The unit raw material costs also declined by *** per pound in 2014-2015 and increased by *** dollars per pound in 2015-2016; and it was *** dollars per pound higher in interim 2018 than in interim 2017. CR/PR at Table VI-1.

[155] CR at V-4, PR at V-2; Hearing Tr. at 37 (Cullen); Petitioners' Prehearing Brief at 21; iResin's Prehearing Brief at 17; Niagara's Prehearing Brief at 22-23.

[156]Data from the lost sales/lost revenue survey indicate that only two of the 25 responding purchasers reported that U.S. producers reduced prices in order to compete with low-priced subject imports. CR/PR at Table V-14.

[157] We observed above that the lower subject import volume in interim 2018 was due in part to the pendency of these investigations. With respect to price, for the period between the first quarter of 2015 and the fourth quarter of 2017, domestic prices for Product 4 rose from *** dollars per pound to *** dollars per pound, Product 1 remained the same at *** dollars per pound, Product 2 declined from *** dollars per pound to *** dollars per pound, and Product 3 declined from *** dollars per pound to *** dollars per pound. However, we noted above that the domestic price for all four pricing products started increasing in the first through third quarters of 2016 and increased irregularly into 2017 and interim 2018. CR/PR at Tables V-3 to 6.

respectively.[158] While Petitioners argue there was a cost-price squeeze in 2017, the increase in the COGS to net sales ratio was relatively small (*** percentage points), and the domestic industry's commercial shipments AUV improved by 4.5 percent and net sales AUV also improved by 5.4 percent.[159] Furthermore, as indicated above, subject imports oversold the domestic product in the vast majority of comparisons in 2017, so subject imports would not have had the effect of preventing price increases that would otherwise have occurred to a significant degree.[160]

In view of the foregoing, we find that subject imports, which generally oversold the domestic product during the POI, did not have the effect of depressing prices or preventing price increases for the domestic like product that would otherwise have occurred to a significant degree. Accordingly, we do not find that the subject imports caused significant price effects.

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[158] CR/PR at Table VI-1.

[159] CR/PR at Table C-1. We agree with Petitioners that IPA accounts for a small share of input costs. Petitioners' Posthearing Brief at 20, Exh. 2 at confidential slide 39. However, we also take into consideration that PET resin sales contracts were generally not indexed to IPA prices, which increased significantly by *** percent in 2017. CR/PR at V-1, Figure V-1. Such a substantial increase in even a minor cost factor likely had some effect on the domestic industry's ability to pass through costs in the form of increased prices. While *** had announced price increases through surcharges to account for the increase in IPA prices, the increases were not effective until April, May, or June of 2017, whereas the spike in IPA prices began in January of 2017. Petitioners' Posthearing Brief, Answers to Commissioners Questions at 16-17. Indeed, ***, announced in its earnings reports for the second quarter 2017 that tightness of IPA supply had resulted in incremental cost increases, which had not been completely transferred to PET resin prices. iResin's Posthearing Brief, Exh. 5 ***. This is consistent with Respondents' assertion that the domestic industry's response to the unexpected increase in IPA prices was delayed. iResin's Prehearing Brief at 32; iResin's Posthearing Brief at 10-11. Therefore, even though *** may have been able to readjust prices to account for the unexpected IPA price surge in 2017, the readjustment would have only been reflected in the latter half of 2017 while the IPA price increases occurred throughout that year.

[160] We recognize that Petitioners raise an example that *** attempted to announce PET resin price increases for *** to cover increases in raw material costs, but those increases never materialized due to subject imports. Petitioners' Posthearing Brief, Answers to Commissioners at 18-19. However, the record indicates that the vast majority of *** commercial shipments were contracted sales. CR/PR at Table V-2. We also recognize Petitioners' claim that *** was unable to increase formula margins because contracted customers, such as *** used subject import pricing as a basis to keep margins low. Petitioners' Posthearing Brief, Answers to Commissioners Questions at 18. However, the information in the record does not show that these customers used prices of subject merchandise specifically, as opposed to competing prices generally or prices of domestic or nonsubject product, to negotiate terms with ***. Furthermore, only two purchasers confirmed allegations that domestic producers reduced prices due to competition with subject imports. CR/PR at Table V-14. Therefore, we are not persuaded by Petitioners' price suppression arguments.

E. Impact of the Subject Imports[161]

Section 771(7)(C)(iii) of the Tariff Act provides that examining the impact of subject imports, the Commission "shall evaluate all relevant economic factors which have a bearing on the state of the industry."[162] These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, gross profits, net profits, operating profits, cash flow, return on investment, return on capital, ability to raise capital, ability to service debts, research and development, and factors affecting domestic prices. No single factor is dispositive and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[163]

Domestic PET resin production increased from 5.6 billion pounds in 2015 to 5.9 billion pounds in 2016 and declined to 5.6 billion pounds in 2017; production was 1.2 billion pounds in interim 2017 and 1.4 billion pounds in interim 2018.[164] The domestic industry's production capacity remained level at 6.9 billion pounds in 2015 and 2016 and declined to 6.8 billion pounds in 2017; capacity was 1.7 billion pounds in interim 2017 and 1.6 billion pounds in interim 2018.[165] Capacity utilization increased from 81.0 percent in 2015 to 84.8 percent in 2016 and subsequently declined to 82.1 percent in 2017; capacity utilization was 69.3 percent in interim 2017 and 89.0 percent in interim 2018.[166] As stated above, the domestic industry's market share declined from 84.9 percent of apparent U.S. consumption in 2015 to 79.5 percent in 2016 and increased slightly to 80.9 percent in 2017; its market share was 76.3 percent in

[161] The statute instructs the Commission to consider the "magnitude of the dumping margin" in an antidumping proceeding as part of its consideration of the impact of imports. 19 U.S.C. § 1677(7)(C)(iii)(V). In its final antidumping duty determinations, Commerce found weighted-average dumping margins of 29.68 percent to 275.89 percent for all subject imports from Brazil, 30.61 percent to 53.50 percent for all subject imports from Indonesia, 8.23 percent to 101.41 percent for all subject imports from Korea, 43.81 percent to 59.92 percent for all subject imports from Pakistan, and 5.16 percent to 45 percent for all subject imports from Taiwan. CR/PR at Tables I-1 to 5. We take into account in our analysis the fact that Commerce has made final findings that all subject producers in Brazil, Indonesia, Korea, Pakistan, and Taiwan are selling subject imports in the United States at less than fair value. In addition to this consideration, our impact analysis has considered other factors affecting domestic prices. Our analysis of the lack of significant underselling and price effects of subject imports, described in both the price effects discussion and below, is particularly probative to an assessment of the impact of the subject imports.

[162] 19 U.S.C. § 1677(7)(C)(iii); *see also* SAA at 851 and 885 ("In material injury determinations, the Commission considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they also may demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports.").

[163] 19 U.S.C. § 1677(7)(C)(iii). This provision was amended by the Trade Preferences Extension Act of 2015, Pub. L. 114-27.

[164] CR/PR at Table C-1.

[165] CR/PR at Table C-1.

[166] CR/PR at Table C-1.

interim 2017 and 81.1 percent in interim 2018.[167] The domestic industry's end-of-period inventories increased from *** pounds in 2015 to *** pounds in 2016 and declined to *** pounds in 2017; the end-of-period inventories were *** pounds in interim 2017 and *** pounds in interim 2018.[168]

Employment trends related to the number of production and related workers ("PRWs"), hours worked per PRW, wages paid, and hourly wages were mixed during the POI.[169] Productivity declined overall from 2015 to 2017 and was higher in interim 2018 than in interim 2017.[170] Unit labor costs declined overall from 2015 to 2017, and were lower in interim 2018 than interim 2017.[171]

The domestic industry's net sales revenue declined from $*** in 2015 to $*** in 2016 and increased to $*** in 2017; the net sales revenue was $*** in interim 2017 and $*** in interim 2018. The industry's total COGS declined from $*** in 2015 to $*** in 2016 and increased to $*** in 2017; COGS increased from $*** in interim 2017 to $*** in interim 2018. Gross profit increased from $*** in 2015 to $*** in 2016 before declining to $*** in 2017; gross profit was $*** in interim 2017 and $*** in interim 2018. Operating income increased from $*** in 2015 to $*** in 2016 and declined to $*** in 2017; operating income was *** in interim 2017 and $*** in interim 2018. Similarly, the industry's operating income margin increased from *** percent in 2015 to *** percent in 2016, and subsequently declined to *** percent in 2017; the margin was *** percent in interim 2017 and *** percent in interim 2018. Net income increased from *** in 2015 to $*** in 2016 before declining to *** in 2017; it was *** in interim 2017 and $*** in interim 2018.[172]

During a period of overall increasing demand, the domestic industry increased its shipments in every full year of the POI. Subject imports increased significantly both absolutely and relative to consumption, but did not significantly undersell the domestic like product. Therefore, although the domestic industry ceded some market share to subject imports over the POI, this occurred for non-price reasons, as will be discussed below. In addition, the

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[167] CR/PR at Table C-1.

[168] CR/PR at Table C-1.

[169] CR/PR at Table C-1. Number of PRWs declined from 889 in 2015 to 886 in 2016 and increased to 931 in 2017; it was 933 and 813 in interim 2017 and interim 2018, respectively. Total hours worked increased annually from 1.9 million hours in 2015 to 2.0 million hours in 2016 and 2.1 million hours in 2017; it was 518,000 hours in interim 2017 and 456,000 hours in interim 2018. Wages paid declined annually from $71 million in 2015 to $69 million in 2016 and $66 million in 2017; wages paid were $17 million in interim 2017 and $15 million in interim 2018. Hourly wages declined annually from $37.95 in 2015 to $35.03 in 2016 and $32.22 in 2017; hourly wages were $33.38 in interim 2017 and $32.00 in interim 2018. *Id*.

[170] CR/PR at Table C-1. Productivity, in pounds per hour, declined from 3,008 pounds per hour in 2015 to 2,997 pounds per hour in 2016, and declined to 2,725 pounds per hour in 2017; it was 2,314 pounds per hour in interim 2017 and 3,053 pounds per hour in interim 2018. *Id*.

[171] CR/PR at Table C-1. Unit labor costs per 1,000 pounds declined from $12.62 in 2015 to $11.69 in 2016 and increased slightly to $11.83 in 2017; they were $14.42 in interim 2017 and $10.48 in interim 2018. *Id*.

[172] CR/PR at Table C-1.

domestic industry's financial condition improved in 2016, the year with the most significant increase in subject imports.[173] While the domestic industry's operating income experienced periodic declines, subject imports generally were higher priced throughout the POI. As discussed above, we did not find that subject imports had any significant adverse price effects on the domestic industry. Consequently, we do not find that the presence of the cumulated subject imports explains the decline in the industry's financial performance during the POI.[174]

Petitioners contend that the domestic industry was unable to fully realize the benefits of the imposition of trade remedy orders on Canada, China, India, and Oman as subject imports surged into the market in 2016 supplanting these nonsubject imports and taking market share from the domestic industry.[175] We acknowledge that the domestic industry lost *** percentage points of market share and subject imports gained *** percentage points as subject imports increased substantially in that year.[176] However, as discussed earlier, subject imports largely oversold the domestic product in 2016,[177] so any market share shifts in that year were due to factors other than price. Furthermore, in 2016 domestic producers chose to increase their imports of PET resin from affiliated producers in subject and nonsubject countries by *** percent;[178] these imports gained *** percentage points of U.S. market share.[179] The producers

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[173] Petitioners contend that M&G USA's bankruptcy is indicative of material injury by reason of subject imports. Petitioners' Prehearing Brief at 46-47. Generally, the Commission analyzes the impact of subject imports on the domestic industry "as a whole," and not on injury to specific firms. *See Comm. for Fair Coke Trade v. United States*, 28 CIT 1140, 1167-68 (2004). Nonetheless, we observe that M&G USA stated in its bankruptcy declaration filed in October 2017 that "delays and cost overruns at the Corpus Christi Plant {were} the primary cause of {M&G USA's} liquidity crisis that led to the filing of the" bankruptcy. Imports were only identified as one of several additional market forces that accompanied these cost overruns. iResin's Prehearing Brief, Exh. 4 at 16. Furthermore, bankruptcy was not limited to M&G USA only; rather, it was described as a global conglomerate-wide occurrence that also affected M&G's other operations. CR at III-11 to 12, PR at III-6 to 7. Finally, we find that domestic producer *** in 2017 was not due to subject imports as it was caused by M&G's bankruptcy. CR at VI-16 to 17 n.20; PR at VI-5 n.20.

[174] We observe that the lower volume of subject imports in interim 2018 compared to interim 2017, and the improved operating performance of the domestic industry was likely due at least in part to the pendency of these investigations. CR/PR at Tables IV-12, 13 and VI-1, and C-1; Petitioners' Prehearing Brief at 50-51.

[175] Petitioners' Prehearing Brief at 43-46.

[176] CR/PR at Table IV-13.

[177] As detailed above, subject imports oversold the domestic product in 32 of 50 quarterly price comparisons (282.5 million pounds) in 2016 by an average margin of 5 percent and undersold the domestic product in the remaining 18 quarterly comparisons (162.1 million pounds) by an average margin of 6.1 percent. Calculated from CR/PR at Tables V-3 to 6.

[178] CR/PR at Table IV-3.

[179] *See* CR at I-40; PR at IV-21. U.S. producers' U.S. shipments of subject imports as a share of apparent U.S. consumption were *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in interim 2017, and *** percent in interim 2018. U.S. producers' U.S. shipments of nonsubject imports as a share of apparent U.S. consumption were *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in interim 2017, and *** percent in interim 2018. U.S. producers' U.S.

indicated that they brought in imports to supplement domestic production or to supply a type of PET resin not made domestically.[180] U.S. producers' stated reasons for increasing their own imports are corroborated by purchaser reports of U.S. producers supplying purchasers with imports rather than U.S.-produced PET resin.[181] Consistent with the domestic industry supplementing its supply to the market with imports, the record also contains numerous reports of domestic supply constraints during this period, including customers being placed on allocation, delayed deliveries, and disruptive weather events.[182] The lost sales/lost revenue survey responses also show purchasers nearly unanimously reporting that domestic producers had supply issues, as 14 of 18 purchasers that switched to subject imports responded that the lower price of these imports was not a primary reason for the shift.[183] Therefore, although Petitioners argue that supply constraints were limited to a brief period at the end of the POI,[184] U.S. producers' decisions to increase their imports to supplement U.S. supply, the responses by purchasers regarding their decisions to purchase subject imports, and the increase in subject imports despite being higher priced, all indicate that low-priced subject imports were not the basis for the market share changes that occurred when the volume of nonsubject imports from Canada, China, India, and Oman declined substantially in 2016 and thereafter.

In view of the foregoing, we find that subject imports have not had a significant adverse impact on the domestic industry.

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shipments of both subject and nonsubject imports as a share of apparent U.S. consumption were *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in interim 2017, and *** percent in interim 2018. *Id*.

[180] According to ***. CR/PR at Table III-9. While Petitioners' posthearing brief included an affidavit from an executive of *** stating that an additional reason for importing was ***, we note that *** subject imports were generally *** than domestic PET resin. Petitioners' Posthearing Brief, Exh. 5 at 2; CR/PR at Table V-10. *** also significantly increased its subject and nonsubject imports in 2016 in anticipation of the ***. *** U.S. Importer's Questionnaire at II-4; CR/PR at Table III-9; CR at III-10, PR at III-6. ***. CR/PR at Table III-9. The fourth U.S. producer, ***, certified that it did not import PET resin. *** U.S. Producers' Questionnaire at II-7.

[181] CR/PR at Table II-4 (statements by *** regarding U.S. producers' use of imports to supply customers); CR at II-26, PR at II-16 (purchasers reporting reasons for decreased domestic purchases included limited availability of domestic product and that suppliers chose to supply the purchases with imports rather than their U.S.-produced PET resin); CR at II-28, PR at II-16 (8 of 23 purchasers reported that they had ordered domestic product but were instead supplied imported product. Seven of 24 purchasers reported that they had searched for domestic PET resin but had been offered imported product); CR/PR at Table V-12 (*** response to lost sales allegation concerning ***).

[182] CR/PR at Table II-4.

[183] CR/PR at Table V-12.

[184] Petitioners' Prehearing Brief at 54-55; Hearing Tr. at 23 (McNaull).

VI. No Threat of Material Injury by Reason of Subject Imports

A. Legal Standard

Section 771(7)(F) of the Tariff Act directs the Commission to determine whether the U.S. industry is threatened with material injury by reason of the subject imports by analyzing whether "further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted."[185] The Commission may not make such a determination "on the basis of mere conjecture or supposition," and considers the threat factors "as a whole" in making its determination whether dumped or subsidized imports are imminent and whether material injury by reason of subject imports would occur unless an order is issued.[186] In making our determination, we consider all statutory threat factors that are relevant to these investigations.[187]

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[185] 19 U.S.C. § 1677(7)(F)(ii).

[186] 19 U.S.C. § 1677(7)(F)(ii).

[187] These factors are as follows:

(I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement) and whether imports of the subject merchandise are likely to increase,

(II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,

(III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,

(IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices and are likely to increase demand for further imports,

(V) inventories of the subject merchandise,

(VI) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products,

…

(VIII) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).

19 U.S.C. § 1677(7)(F)(i). To organize our analysis, we discuss the applicable statutory threat factors using the same volume/price/impact framework that applies to our material injury analysis. Statutory threat factors (I), (II), (III), (V), and (VI) are discussed in the analysis of subject import volume. Statutory threat factor (IV) is discussed in the analysis of subject import price effects. Statutory factors

B. Cumulation for Threat

Under section 771(7)(H) of the Tariff Act, the Commission may "to the extent practicable" cumulatively assess the volume and price effects of subject imports from all countries as to which petitions were filed on the same day if the requirements for cumulation in the material injury context are satisfied.[188]

We found in our discussion of cumulation above that there is a reasonable overlap of competition among subject imports from all five countries and between subject imports from each country and the domestic like product. The considerations discussed above apply to our decision to cumulate subject imports for the purposes of our threat analysis. The record does not indicate that there would likely be any significant difference in the conditions of competition between subject imports from the five countries in the imminent future. The volume of each subject country increased from 2015 to 2017, and imports from each subject country generally oversold domestic PET resin. We recognize that the industry in Brazil and in the United States underwent ownership changes, making global competition among the subject industry and the United States more concentrated.[189] However, we find that these changes do not warrant a determination to not cumulate all subject imports. Therefore, we conclude that it is appropriate to exercise our discretion to cumulate subject imports from Brazil, Indonesia, Korea, Pakistan, and Taiwan for the purposes of our threat analysis.

A. Analysis

1. Likely Volume

In section V.C. above, we found the volume of cumulated subject imports and the increase in the volume to be significant during the POI, absolutely and relative to consumption in the United States. However, we also found that subject import penetration in the U.S. market in interim 2018 was significantly lower than that of interim 2017 and recognize that the pendency of these investigations likely contributed to this change.[190]

We recognize that the capacity of the subject industries is high both absolutely and relative to apparent U.S. consumption.[191] However, capacity utilization in the subject industries

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(VIII) and (IX) are discussed in the analysis of impact. Statutory factor (VII) concerning agricultural products is inapplicable to this investigation.

[188] 19 U.S.C. § 1677(7)(H).

[189] The record indicates that Citepe was acquired by Alpek and M&G Brazil was acquired by Indorama Ventures, in May 2018. CR at VII-4, PR at VII-3. The record also indicates that in the U.S. market, M&G USA's Apple Grove West Virginia's facility was acquired by Far Eastern; and M&G USA's Corpus Christi development is in the process of being acquired by a joint venture comprised of Alpek, Indorama Ventures, and Far Eastern. CR at III-12 to 13, PR at III-7 to 8.

[190] CR/PR at Tables IV-13 and C-1.

[191] *Compare* CR/PR at Table VII-22 *with* CR/PR at Table IV-12. Cumulated subject producers' capacity was 6.2 billion pounds in 2015, and 6.8 billion pounds in 2016 and 2017; the capacity was 1.7 billion pounds in interim 2018 and 1.8 billion pounds in interim 2018. CR/PR at Table VII-22. Petitioners contend that the capacity figures for the subject industries in Indonesia and Korea are understated due

has remained relatively high, with a slight overall decline from 2015 to 2017, and it is projected to increase in 2018 and 2019.[192] Thus, subject producers have a relatively modest ability to increase production.[193]

While the record indicates that subject producers are somewhat export-oriented and export shipments to the United States as a ratio to total export shipments increased over the POI, the ratio of exports shipments to the United States is projected to decline significantly in 2018 from prior levels as export shipments to other markets are expected to increase.[194] This is consistent with the response by a majority of market participants reporting that demand outside the United States is increasing.[195] Consequently, the record does not indicate that efforts by subject producers to utilize excess capacity and increase export shipments will focus on the U.S. market. Indeed, arranged subject imports to the U.S. market are reported to

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to the lack of participation by certain firms in those countries, and they urge the Commission to apply adverse inferences with respect to Korea. Petitioners' Prehearing Brief at 58-59. The data coverage in the record accounts for essentially all known production in Indonesia and *** in-scope PET resin exports from Indonesia to the United States in 2017, and essentially all known Korean PET resin production and *** percent of in-scope PET resin exports from Korea to the United States in 2017. CR at VII-10, 20, PR at VII-7, 13. The Commission issued foreign producer/exporter questionnaires to firms identified in the Petition and information contained in *** record. Additional firms identified in the petitions did not have valid contact information and were either not listed as exporters of PET resin in *** records or accounted for a relatively small portion of subject imports from its respective country. CR at VII-10 n.9, VII-20 n.17-18, PR at VII-7 n.9, VII-13 n.17-18. Therefore, we find that the data coverage for both subject countries is sufficient.

[192] CR/PR at Table VII-22. Subject producers' capacity utilization was 85.4 percent in 2015, 85.6 percent in 2016, 83.7 percent in 2017, and it was 84.4 percent in interim 2017 and 82.5 percent in interim 2018. Subject producers' capacity utilization is projected to increase to 86.2 percent in 2018 and 86.3 percent in 2019. *Id*.

We also observe that there is some limited potential for product shifting as subject producers from Indonesia, Pakistan, and Taiwan reported production of out-of-scope products on same equipment for PET resin. The ratio of out-of-scope product production during 2015-17 ranged from *** percent to *** percent for subject producers in Indonesia, *** percent to *** percent for subject producers in Pakistan, and *** percent to *** percent for subject producers in Taiwan. CR/PR at Tables VII-7, VII-16, and VII-20.

[193] Subject producers' production was 5.7 billion pounds in 2015, 5.8 billion pounds in 2016, and 5.7 billion pounds in 2017; it was 1.4 billion pounds in interim 2017 and interim 2018. Their production is projected to be 6 billion pounds in 2018 and 2019. CR/PR at Table VII-22.

[194] CR/PR at Table VII-22. The ratio of export shipment to total shipments was 52.0 percent in 2015, 52.4 percent in 2016, 52.7 percent in 2017, 54.8 percent in interim 2017, and 53.3 percent in interim 2018. The ratio of export shipments to the U.S. market to total shipments was 5.2 percent in 2015, 12.3 percent in 2016, 14.3 percent in 2017, 15.8 percent in interim 2017, and 8.0 percent in interim 2018. This ratio is projected to decline significantly to 4.9 percent in 2018 and 2019. *Id*. The record also indicates that imports from each subject source are subject to trade remedy orders and investigations in at least one of the following countries: Argentina, Brazil, Indonesia, Malaysia, South Africa, and Turkey. CR at VII-50 to 52, PR at VII-32 to 34.

[195] CR/PR at Table II-5 and 6.

decline from *** pounds in the second quarter of 2018 to *** pounds in the third quarter of 2018, and none in the remaining periods of 2018 and 2019.[196]

The record indicates that U.S. importer inventories increased from 2015 to 2017 but the inventory level in interim 2018 was significantly lower than interim 2017.[197] Moreover, inventories in the subject countries declined in both absolute and relative terms from 2015 to 2017 and were lower in interim 2018 than interim 2017.[198]

As stated above, the record indicates that there has been a significant rate of increase in the volume and market penetration of imports of the subject merchandise during the POI. However, there is no indication that subject imports will increase significantly in the imminent future in light of the stable capacity utilization of the subject industries, likely growth and availability of other export markets, lack of growth in inventories in the subject countries, and limited potential for product shifting. Furthermore, we note the increased ownership linkages between the domestic industry and the industries in Brazil, Indonesia, and Taiwan.[199] There is some indication that these ties will limit future subject imports from these countries. [200]

2. Likely Price Effects

In section V.D. above, we found that subject imports oversold the domestic product in a majority of quarterly price comparisons and total volume, the prevalence of which increased annually during the POI. We also found that notwithstanding the increasing volume of subject imports during the POI, subject imports did not have significant effects on prices for the domestic like product.

Therefore, even if there is some increase in the volume of cumulated subject imports entering the U.S. market in the imminent future, in light of the generally higher-priced subject imports and the lack of causal relationship between increasing subject import volumes and price levels of the domestic like product during the POI, the record does not support that

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[196] CR/PR at VII-24. The record indicates that the majority of the arranged imports are from ***. We observe that the lower levels are consistent with Taiwan-based producer Far Eastern's acquisition of M&G USA's West Virginia plant and involvement in the acquisition of M&G USA's Corpus Christi development.

[197] U.S. importer inventories of subject imports were *** pounds in 2015, *** pounds in 2016, and *** pounds in 2017; inventories were *** pounds in interim 2017 and *** pounds in interim 2018. CR/PR at Table VII-23.

[198] CR/PR at Table VII-22.

[199] Citepe was acquired by Alpek and M&G Brazil was acquired by Indorama Ventures, in May 2018. CR at VII-4, PR at VII-3. M&G USA's Apple Grove West Virginia's facility was acquired by Far Eastern; and M&G USA's Corpus Christi development is in the process of being acquired by a joint venture comprised of Alpek, Indorama Ventures, and Far Eastern, pending approval by the Federal Trade Commission. CR at III-12 to 13, PR at III-7 to 8; Petitioners' Posthearing Brief, Answers to Commissioners Questions at 29-30.

[200] After DAK's parent acquired Brazilian producer Citepe, that company noted that it ***. CR at VII-7; PR at VII-4. The purchase and restart by the main Taiwan producer FENC of the former M&G Apple Grove facility, and FENC's participation in the pending purchase of the former M&G Corpus Christi facility, is consistent with the Taiwan industry's projection of ***. CR/PR at Table VII-19.

subject imports will likely depress or suppress domestic prices. We consequently find that imports of the subject merchandise are unlikely to enter at prices that would be likely to have a significant depressing or suppressing effect on domestic prices or that would be likely to increase demand for further subject imports.

3. Likely Impact

We found in section V.E. above that during the POI the domestic industry increased output and shipments, but experienced declines in financial performance. We further found that the declines in financial performance were not a result of the subject imports. In light of our findings that there is not likely to be a significant increase in subject import volume during the imminent future that will result in an appreciable decline in the domestic industry's market share and that subject imports will not likely have significant price effects, the record does not indicate a probability that material injury by reason of subject imports is imminent.[201]

VII. Conclusion

For the reasons stated above, we determine that an industry in the United States is not materially injured or threatened with material injury by reason of subject imports of PET resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan that are sold in the United States at less than fair value.

[201] We recognize that the domestic industry's operating income margins have been low during the POI. However, in light of the fact that global and domestic outlook for PET resin demand are positive, there has been increased international involvement in the Corpus Christi development, and our finding that subject imports did not cause material injury to the domestic industry, we do not find that the domestic industry is in a vulnerable condition.

PART I: INTRODUCTION

BACKGROUND

These investigations result from petitions filed with the U.S. Department of Commerce ("Commerce") and the U.S. International Trade Commission ("USITC" or "Commission") by DAK Americas LLC, Charlotte, North Carolina; Indorama Ventures USA, Inc., Decatur, Alabama; M&G Polymers USA, LLC, Houston, Texas; and Nan Ya Plastics Corporation, America, Lake City, South Carolina, on September 26, 2017, alleging that an industry in the United States is materially injured and threatened with material injury by reason of less-than-fair-value ("LTFV") imports of polyethylene terephthalate ("PET") resin[1] from Brazil, Indonesia, Korea, Pakistan, and Taiwan. The following tabulation provides information relating to the background of these investigations.[2] [3]

Effective date	Action
September 26, 2017	Petitions filed with Commerce and the Commission; institution of the Commission's investigations
October 16, 2017	Commerce's notice of initiation
November 13, 2017	Commission's preliminary determinations
May 4, 2018	Commerce's preliminary determinations (83 FR 19689-19701, May 4, 2018); scheduling of final phase of Commission investigations (83 FR 26306, June 6, 2018)
September 13, 2018	Commission's hearing
September 24, 2018	Commerce's final determinations (83 FR 48278-48289, September 24, 2018)
October 18, 2018	Commission's vote
November 6, 2018	Commission's views

STATUTORY CRITERIA AND ORGANIZATION OF THE REPORT

Statutory criteria

Section 771(7)(B) of the Tariff Act of 1930 (the "Act") (19 U.S.C. § 1677(7)(B)) provides that in making its determinations of injury to an industry in the United States, the Commission—

[1] See the section entitled "The Subject Merchandise" in Part I of this report for a complete description of the merchandise subject to this proceeding.

[2] Pertinent *Federal Register* notices are referenced in appendix A, and may be found at the Commission's website (www.usitc.gov).

[3] The list of hearing witnesses is presented in appendix B.

shall consider (I) the volume of imports of the subject merchandise, (II) the effect of imports of that merchandise on prices in the United States for domestic like products, and (III) the impact of imports of such merchandise on domestic producers of domestic like products, but only in the context of production operations within the United States; and. . . may consider such other economic factors as are relevant to the determination regarding whether there is material injury by reason of imports.

Section 771(7)(C) of the Act (19 U.S.C. § 1677(7)(C)) further provides that--[4]

In evaluating the volume of imports of merchandise, the Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States is significant.. . .In evaluating the effect of imports of such merchandise on prices, the Commission shall consider whether. . .(I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.. . . In examining the impact required to be considered under subparagraph (B)(i)(III), the Commission shall evaluate (within the context of the business cycle and conditions of competition that are distinctive to the affected industry) all relevant economic factors which have a bearing on the state of the industry in the United States, including, but not limited to. . . (I) actual and potential decline in output, sales, market share, gross profits, operating profits, net profits, ability to service debt, productivity, return on investments, return on assets, and utilization of capacity, (II) factors affecting domestic prices, (III) actual and potential negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, (IV) actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and (V) in {an antidumping investigation}, the magnitude of the margin of dumping.

In addition, Section 771(7)(J) of the Act (19 U.S.C. § 1677(7)(J)) provides that—[5]

[4] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.
[5] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

(J) EFFECT OF PROFITABILITY.—The Commission may not determine that there is no material injury or threat of material injury to an industry in the United States merely because that industry is profitable or because the performance of that industry has recently improved.

Organization of report

Part I of this report presents information on the subject merchandise, dumping margins, and domestic like product. Part II of this report presents information on conditions of competition and other relevant economic factors. Part III presents information on the condition of the U.S. industry, including data on capacity, production, shipments, inventories, and employment. Parts IV and V present the volume of subject imports and pricing of domestic and imported products, respectively. Part VI presents information on the financial experience of U.S. producers. Part VII presents the statutory requirements and information obtained for use in the Commission's consideration of the question of threat of material injury, as well as information regarding nonsubject countries.

MARKET SUMMARY

PET resin within the scope of these investigations is generally used to produce bottles and containers for beverages, foods, household cleaners, and cosmetics. It can also be used to produce other forms of packaging, such as food trays and drinking cups, as well as high-strength strapping and carpet fibers.[6] There are four known U.S. producers of PET resin: DAK Americas ("DAK"), M&G Polymers USA ("M&G"),[7] Indorama Ventures Holdings LP ("Indorama"), and Nan Ya Plastics Corporation, America ("Nan Ya"). The leading foreign producers of PET resin in the five subject countries are M&G Polímeros Brasil S.A. ("M&G Polímeros Brazil")[8] and Companhia

[6] Petitions, pp. 7-8.

[7] M&G's West Virginia PET resin production facility is now owned by Taiwan PET resin producer Far Eastern New Century Corp. ("FENC" or "Far Eastern"). In October 2017, M&G filed for bankruptcy and its U.S. PET resin facility in West Virginia was shut down. The sale of M&G's West Virginia facility to Taiwan PET resin producer Far Eastern was finalized through bankruptcy proceedings in March 2018 and the West Virginia facility was renamed APG Polytech LLC. *M&G Polymers USA Files for Chapter 11 Protection,* http://www.plasticsnews.com/article/20171025/NEWS/171029941/mg-polymers-usa-files-for-chapter-11-protection, retrieved October 27, 2017; and Certificate of Amendment of Certificate of Formation of FE Polytech, LLC, Information for the Transfer of Control, March 29, 2018, https://www.nrc.gov/docs/ML1810/ML18100A360.pdf, retrieved August 13, 2018.

[8] M&G Polímeros Brasil was purchased by Indorama Ventures (parent company of U.S. and Indonesian PET resin producers) following the M&G bankruptcy proceedings and was renamed Indorama Ventures Polímeros S/A. "Corpus Christi Polymers: Acquisition of the PTA/PET complex of M&G in Texas," *Plasticker-News*, April 10, 2018,

(*continued*...)

Integrada Textil de Pernambuco ("Citepe") in Brazil;[9] PT IndoRama Synthetics Tbk ("IndoRama Synthetics"), PT IndoRama Polypet Indonesia ("IndoRama Polypet"), and IndoRama Ventures Indonesia, PT ("IndoRama Ventures") in Indonesia; Lotte Chemical Corporation ("Lotte"), SK Chemicals Co. Ltd. ("SK Chemicals"), and TK Chemical Corporation ("TK Chemical") in Korea; Gatron (Industries) Ltd. ("Novatex") in Pakistan; and Far Eastern New Century Corp. ("FENC" or "Far Eastern"), Shinkong Synthetic Fibers Corp. ("Shinkong"), Worldwide Polychem (HK), Ltd. ("Worldwide"), Lealea Enterprise Co., Ltd. ("Lealea"), and Nan Ya Plastics Corp. ("Nan Ya Taiwan") in Taiwan.

The leading U.S. importers of PET resin from the respective subject countries during 2017 were *** and *** from Brazil; *** and *** from Indonesia; ***, ***, and *** from Korea; *** and *** from Pakistan; and *** from Taiwan. The leading nonsubject sources of PET resin imports are Canada and Mexico. Leading U.S. importers of PET resin from Canada and Mexico include *** and ***, respectively. U.S. purchasers of PET resin are firms that primarily produce packaging for beverages and food; leading purchasers include ***.

Apparent U.S. consumption of PET resin totaled approximately 7.0 billion pounds ($3.8 billion) in 2017. U.S. producers' U.S. shipments of PET resin totaled 5.7 billion pounds ($3.1 billion) in 2017, and accounted for 80.9 percent of apparent U.S. consumption by quantity and 81.2 percent by value. Shipments of U.S. imports from subject sources totaled 831.3 million pounds ($437.9 million) in 2017 and accounted for 11.9 percent of apparent U.S. consumption by quantity and 11.6 percent by value. Shipments of U.S. imports from nonsubject sources totaled 507.4 million pounds ($270.3 million) in 2017 and accounted for 7.2 percent of apparent U.S. consumption by quantity and value.

SUMMARY DATA AND DATA SOURCES

A summary of data collected in these investigations is presented in appendix C, table C-1. Except as noted, U.S. industry data are based on questionnaire responses of four firms that accounted for all known U.S. production of PET resin during 2017. U.S. import data are based on the data of 21 firms[10] that represent an estimated *** percent of total subject imports, ***

(…*continued*)
https://plasticker.de/Plastics_News_32445_Corpus_Christi_Polymers_Acquisition_of_the_PTA_PET_complex_of_M+G_in_Texas, retrieved on August 8, 2018.

[9] Citepe's Brazilian facility was acquired by the parent company of U.S. producer DAK in May 2018. "Closing of Sale of PetroquímicaSuape and Citepe," Petrobras website, press release, April 30, 2018, http://www.investidorpetrobras.com.br/en/press-releases/closing-sale-petroquimicasuape-and-citepe, retrieved August 8, 2018.

[10] Nineteen importers provided responses to the Commission's questionnaire in the final phase of these investigations. The Pacific Rim Traders LLC ("Pacific Rim"), a key U.S. importer from Korea, and Ampet, Inc. ("Ampet"), an importer of PET resin from Indonesia, did not provide questionnaire responses in the final phase of these investigations, although Pacific Rim provided a questionnaire response in the preliminary phase. To address gaps in the data created by the absence of certain questionnaire responses in the final phase of these investigations, data submitted in response to U.S.

(*continued*...)

percent of U.S. imports from Brazil, *** percent of U.S. imports from Indonesia, *** percent of imports from Korea, *** percent of U.S. imports from Pakistan, and *** percent of imports from Taiwan in 2017.[11] Foreign industry data are based on questionnaire responses from two firms in Brazil, three firms in Indonesia, three firms in Korea,[12] one firm in Pakistan, and two firms in Taiwan. These firms accounted for *** exports from Brazil, Indonesia, and Pakistan to the United States, and represented *** percent and *** percent of exports from Korea and Taiwan to the United States during 2017, respectively.[13] These firms accounted for essentially all known Brazilian, Indonesian, and Korean production, and represented approximately *** percent and *** percent of total PET resin production in Taiwan and Pakistan during 2017.[14]

PREVIOUS AND RELATED INVESTIGATIONS

PET resin has been the subject of two prior countervailing and antidumping duty investigations in the United States. In 2004, antidumping and countervailing duty investigations on PET resin from India, Indonesia, Taiwan, and Thailand were initiated by Commerce and instituted by the Commission.[15] Commerce terminated the antidumping investigation on imports of PET resin from Taiwan and the countervailing duty investigation on imports of PET resin from Thailand.[16] The Commission reached negative injury determinations concerning imports of PET resin from India, Indonesia, and Thailand.[17]

On March 15, 2015, petitions were filed by DAK Americas, M&G Chemicals, and Nan Ya Plastics Corporation, America alleging that imports of PET resin from Canada, China, India, and Oman were being sold at LTFV and subsidized by the governments of China, India, and Oman.[18]

(…*continued*)
importers' questionnaires are supplemented with the previously submitted preliminary phase questionnaire response and ***.

[11] These U.S. import data represent an estimated *** percent of total subject imports, *** percent of U.S. imports from Brazil, *** percent of U.S. imports from Indonesia, *** percent of imports from Korea, *** percent of U.S. imports from Pakistan, and *** percent of imports from Taiwan during the period of investigation (January 2015-March 2018).

[12] The two largest Korean firms (***) provided a response to the Commission's questionnaire in the preliminary phase of these investigations, but did not respond to the Commission's questionnaire in the final phase. The preliminary phase questionnaire responses of Lotte and TK were used in the final phase of these investigations.

[13] Export coverage calculated based on *** import data for in-scope manufacturers in the subject countries.

[14] Production coverage calculated based on information provided in foreign producer questionnaire responses.

[15] *Polyethylene Terephthalate (PET) Resin From India, Indonesia, and Thailand Investigations Nos. 701-TA-439 and 731-TA-1077, 1078 and 1080 (Final)*, USITC Publication 3769, May 2005, p. 1.

[16] Ibid.

[17] Ibid.

[18] *Certain Polyethylene Terephthalate Resin from Canada, the People's Republic of China, India, and the Sultanate of Oman: Initiation of Less-Than-Fair-Value Investigations*, 80 FR 18376, April 6, 2015;
(*continued*...)

Following Commerce's final affirmative dumping and countervailing duty determinations,[19] the Commission made affirmative injury determinations with respect to imports from Canada, China, India, and Oman.[20] Commerce published antidumping duty orders on PET resin from Canada, China, India, and Oman and countervailing duty orders on PET resin from China and India effective May 6, 2016.[21]

NATURE AND EXTENT OF SALES AT LTFV

On September 24, 2018, Commerce published a notice in the *Federal Register* of its final determinations of sales at LTFV with respect to imports from Brazil,[22] Indonesia,[23] Korea,[24] Pakistan,[25] and Taiwan.[26] Tables I-1 through I-5 present Commerce's final dumping margins with respect to imports of PET resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan, respectively.

(…*continued*)
Certain Polyethylene Terephthalate Resin from the People's Republic of China, India, and the Sultanate of Oman: Initiation of Countervailing Duty Investigations, 80 FR 18369, April 6, 2015.

[19] Commerce made a final negative countervailing duty determination with respect to Oman. *Certain Polyethylene Terephthalate Resin From the Sultanate of Oman: Final Negative Countervailing Duty Determination*, 81 FR 13321, March 14, 2016.

[20] *Polyethylene Terephthalate Resin from Canada, China, India, and Oman,* 81 FR 26832, May 4, 2016.

[21] *Certain Polyethylene Terephthalate Resin From Canada, the People's Republic of China, India, and the Sultanate of Oman: Amended Final Affirmative Antidumping Determination (Sultanate of Oman) and Antidumping Duty Orders*, 81 FR 27979, May 6, 2016 (subsequently corrected with respect to India (*Certain Polyethylene Terephthalate Resin From India: Notice of Correction to Antidumping Duty Order*, 81 FR 33660, May 27, 2016); and *Certain Polyethylene Terephthalate Resin From India and the People's Republic of China: Countervailing Duty Order (India) and Amended Final Affirmative Countervailing Duty Determination and Countervailing Duty Order (People's Republic of China)*, 81 FR 27978, May 6, 2016.

[22] *Polyethylene Terephthalate Resin From Brazil: Final Determination of Sales at Less Than Fair Value,* 83 FR 48285, September 24, 2018.

[23] *Polyethylene Terephthalate Resin From Indonesia: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Determination of Critical Circumstances, in Part*, 83 FR 48278, September 24, 2018.

[24] *Polyethylene Terephthalate Resin From the Republic of Korea: Affirmative Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part*, 83 FR 48283, September 24, 2018.

[25] *Polyethylene Terephthalate Resin From Pakistan: Final Determination of Sales at Less Than Fair Value*, 83 FR 48281, September 24, 2018.

[26] *Polyethylene Terephthalate Resin From Taiwan: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Determination of Critical Circumstances, in Part*, 83 FR 48287, September 24, 2018.

Table I-1
PET resin: Commerce's final weighted-average LTFV margins with respect to imports from Brazil

Exporter/producer	Final estimated weighted average dumping margin (percent)
Companhia Integrada Textil de Pernambuco ("Citepe")	275.89
M&G Polímeros Brasil, S.A.	29.68
All others	29.68

Source: 83 FR 48285, September 24, 2018.

Table I-2
PET resin: Commerce's final weighted-average LTFV margins with respect to imports from Indonesia

Exporter/producer	Final estimated weighted average dumping margin (percent)
PT. Indo-Rama Synthetics Tbk. / PT. Indorama Polypet Indonesia/Indorama Ventures Indonesia	53.50
All others	30.61

Source: 83 FR 48278, September 24, 2018.

Table I-3
PET resin: Commerce's final weighted-average LTFV margins with respect to imports from Korea

Exporter/producer	Final estimated weighted average dumping margin (percent)
SK Chemicals Co., Ltd.	8.23
Lotte Chemical Corp., Regd	101.41
TK Chemical Corp.	101.41
All others	8.23

Source: 83 FR 48283, September 24, 2018.

Table I-4
PET resin: Commerce's final weighted-average LTFV margins with respect to imports from Pakistan

Exporter/producer	Final estimated weighted average dumping margin (percent)
Novatex Limited[1]	59.92
All others	43.81

[1] Commerce determined that Novatex Limited and Gatron Industries Limited are a single entity.

Source: 83 FR 48281, September 24, 2018.

Table I-5
PET resin: Commerce's final weighted-average LTFV margins with respect to imports from Taiwan

Exporter/producer	Final estimated weighted average dumping margin (percent)
Far Eastern New Century Corporation, Far Eastern Textile Ltd., and Worldwide Polychem (HK), Ltd.[1]	5.16
Shinkong Synthetic Fibers Corporation	45.00
All others	5.16

[1] Commerce determined that Far Eastern New Century Corporation and Worldwide Polychem (HK) Ltd. are a single entity, and Far Eastern New Century Corporation to be the successor-in-interest of Far Eastern Textile Ltd.

Source: 83 FR 48287, September 24, 2018; and *Issues and Decision Memorandum for the Final Affirmative Determination in the Less-Than-Fair-Value Investigation of Polyethylene Terephthalate Resin from Taiwan*, September 17, 2018, p. 2.

THE SUBJECT MERCHANDISE

Commerce's scope

In the current proceeding, Commerce has defined the scope as follows:

The merchandise covered by this investigation is polyethylene terephthalate (PET) resin having an intrinsic viscosity of at least 70, but not more than 88, milliliters per gram (0.70 to 0.88 deciliters per gram). The scope includes blends of virgin PET resin and recycled PET resin containing 50 percent or more virgin PET resin content by weight, provided such blends meet the intrinsic viscosity requirements above. The scope includes all PET resin meeting the above specifications regardless of additives introduced in the manufacturing process.

The scope excludes PET-glycol resin, also referred to as PETG. PET-glycol resins are manufactured by replacing a portion of the raw material input monoethylene glycol (MEG) with one of five glycol modifiers: Cyclohexanedimethanol (CHDM), diethylene glycol (DEG), neopentyl glycol (NPG), isosorbide, or spiro glycol. Specifically, excluded PET-glycol resins must contain a minimum of 10 percent, by weight, of CHDM, DEG, NPG, isosorbide or spiro glycol, or some combination of these glycol modifiers. Unlike subject PET resin, PET-glycol resins are amorphous resins that are not solid-stated and cannot be crystallized or recycled.

The merchandise subject to this investigation is properly classified under subheadings 3907.61.0000 and 3907.69.0000 of the Harmonized Tariff Schedule of the United States (HTSUS). Although the HTSUS subheadings are

provided for convenience and customs purposes, the written description of the merchandise covered by this investigation is dispositive.[27]

Tariff treatment

Based on the scope set forth by Commerce, information available to the Commission indicates that the merchandise subject to these investigations is classified in subheadings 3907.61.00 and 3907.69.00[28] of the Harmonized Tariff Schedule of the United States ("HTS"). The general rate of duty is 6.5 percent ad valorem for each of these subheadings; originating goods from Korea are eligible for a 1.9 percent ad valorem special duty rate during 2018 under the United States-Korea Free Trade Agreement. Both subheadings are designated as covering goods eligible for duty-free entry under the Generalized System of Preferences, but products of Indonesia are excluded from eligibility. Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

THE PRODUCT

Description and applications

PET resin is a large-volume, commodity-grade thermoplastic polyester polymer. PET resin is predominantly sold in bulk form as chips or pellets to downstream end users/converters. Prior to being converted to downstream products, virgin PET resin pellets are noted for being slightly opaque and whitish in color. Converters use PET resin to produce bottles, containers, and packaging. The major end uses for PET resin include bottles for beverages (e.g., juice, water, and carbonated soft drinks), containers for food (e.g., salad dressings, jams and jellies, peanut butter, edible oils), household cleaners, and cosmetics. PET

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[27] *Polyethylene Terephthalate Resin From Brazil: Final Determination of Sales at Less Than Fair Value,* 83 FR 48285, September 24, 2018. Commerce's scope language in the final determinations concerning Indonesia, Korea, Pakistan, and Taiwan are identical to that of Brazil presented in the text. *Polyethylene Terephthalate Resin From Indonesia: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Determination of Critical Circumstances, in Part*, 83 FR 48278, September 24, 2018; *Polyethylene Terephthalate Resin From the Republic of Korea: Affirmative Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part*, 83 FR 48283, September 24, 2018; *Polyethylene Terephthalate Resin From Pakistan: Final Determination of Sales at Less Than Fair Value*, 83 FR 48281, September 24, 2018; and *Polyethylene Terephthalate Resin From Taiwan: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Determination of Critical Circumstances, in Part*, 83 FR 48287, September 24, 2018.

[28] Between 2014 and 2016, the merchandise subject to these investigations was imported under statistical reporting number 3907.60.0030. Effective January 1, 2017, HS subheading 3907.60 was subdivided to create subheadings 3907.61.00 and 3907.69.00, with classification criteria based on the viscosity number of the product, at the request of the European Union to the World Customs Organization. Petitions, p. 11. The amended HTS statistical number expanded the product coverage to include certain PET resin outside the scope defined by Commerce. Petitions, p. 12.

resin can also be used to produce other forms of packaging, such as food trays and drinking cups, as well as carpet fibers.[29] End-use products manufactured from PET resin are clear, transparent, sterile, lightweight, and thermally stable. Other properties of note for articles made from PET resin are impact resistance, closure integrity, durability, and strength.

Packaging and bottle-grade PET resin typically have an intrinsic viscosity ("IV") of at least 0.70 or more, but not more than 0.88 deciliters per gram.[30] IV is a measure of the molecular weight of PET resin and is a reflection of the resin's melting point, crystallinity, and tensile strength.[31] Bottle-grade resins may contain various additives, including recycled PET, which can vary depending on the desired properties for an end-use product.[32] However, these additives do not alter the fundamental properties of the subject product. PET resin excludes amorphous ("AMPET") resin,[33] which has an IV below 0.70 deciliters per gram, and certain further processed resins having an IV greater than 0.88 deciliters per gram, such as some high tensile strength strapping and extrusion blow mold.[34]

Packaging-grade PET resin can be subdivided into two major end-use classifications: "cold-fill" and "hot-fill." Cold-fill refers to container applications where the substance being filled into the container does not require excessive temperatures in the filling process, i.e., can be filled at ambient room temperature. Hot-fill refers to container applications where the substance poured into the container requires high temperatures (up to 205°F)[35] in the filling process, similar to a canning process. Generally, cold-fill PET resin has a lower IV range than hot-fill PET resin; however, both fall within the IV range of 0.77-0.88 deciliters per gram.[36]

Converters produce bottles and other specialty food containers predominately by an injection stretch blow-molding process. For this process, an intermediate "preform" product is produced by injection molding, followed by a stretch blow-molding process to form finished PET containers. No U.S. PET resin producer has any significant amount of preform or stretch blow-molding equipment intended for commercial use, nor does any domestic PET resin producer have ownership in downstream applications for its polymers. Most bottle converters manufacture both the bottle preforms and the final blow-molded bottles. PET resin can also be extruded into sheets of various thicknesses or thermoformed into such items as clear cups, vegetable containers, or strawberry clamshells.

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[29] Hearing transcript, p. 26 (Freeman).

[30] Test procedure to determine IV is ASTM D4603. "Solution Intrinsic Viscosity" https://www.plastictechnologies.com/test/preform-and-bottle-testing/solution-intrinsic-viscosity.aspx, retrieved August 2, 2018.

[31] Conference transcript, p. 29 (Freeman).

[32] Conference transcript, p. 67 (Paramasivam); p. 128 (Ream).

[33] AMPET is used as a precursor and is processed into PET resin.

[34] An extrusion blow mold is a very large container with a clear handle, commonly seen as orange juice containers. Conference transcript, pp. 79-80 (McNaull).

[35] Conference transcript, p. 139 (Ream).

[36] Conference transcript, p. 81 (McNaull).

The scope of this case also includes blends of virgin and recycled PET resin. The share of recycled content does not impact the IV of the product.[37] However, recycled PET resin is not a complete substitute for virgin PET resin[38] due to impurities that are nearly impossible to remove. Several domestic producers blend small amounts of recycled PET resin with virgin PET resin. The American Plastics Council has labeled PET resin used for bottles with the "PETE 1" code for recycling purposes. This label is usually found on or near the bottom of the PET bottle or container.[39] The shift towards recycling has been accompanied by green products. Bio-polyethylene terephthalate, or "Bio-PET," is PET resin manufactured from the same petro-sourced terephthalic acid. However, the ethylene glycol is not obtained from petrochemicals, but from plants (for example, sugar cane, sugar beet).[40]

PET resin must be protected from moisture and contamination during transport. Imported and exported products are typically shipped offshore in sealed one metric ton poly bags (super sacks) within large metal shipping containers. Subject imported product may be removed from the containers and temporarily stored in order to have some local inventory and save on demurrage. Both imported and domestic product may be shipped bulk inland in specially lined railcars or truck beds in lots of 200,000 pounds and 50,000 pounds, respectively. According to conference testimony, subject imported product can be the most competitive with product from the U.S. producers in coastal regions, where the U.S. producers have a higher cost of inland freight, but where the importers have a lower cost of freight.[41] Transportation costs can vary a great deal depending on the logistics of shipping.

Manufacturing processes

Since the Commission's related investigations concerning PET resin from Canada, China, India, and Oman in 2016 (Investigation Nos. 701-TA-531-532 and 731-TA-1270-1273 (Final)), there have not been any major changes or "breakthroughs" in manufacturing processes for PET resin.[42] Producers manufacture the precursor AMPET resin from a controlled chemical reaction between the petro-based chemical terephthalic acid ("TPA")[43] and the natural gas-based

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[37] Conference transcript, p. 81 (McNaull).

[38] Conference transcript, p. 122 (Safieddin).

[39] PET Resin Association, "Plastics Manufacturers Reconfirm PET Bottles Do NOT Contain BPA," http://www.petresin.org/news_NoBPAinPET.asp, retrieved August 2, 2018.

[40] Novinpack, "PET, recycled PET, and Bio-PET," http://www.novinpak.org/faq-en/pet-recycled-pet-and-bio-pet, retrieved September 27, 2018.

[41] Conference transcript, p. 137 (Safieddin).

[42] Hearing transcript, p. 26 (Freeman).

[43] Older technologies use dimethyl terephthalate ("DMT") in lieu of TPA in manufacturing of AMPET resin, but TPA has largely displaced DMT as the main raw material component in the industry. Also, there are several grades of TPA. The best quality TPA is purified terephthalic acid ("PTA") and this is the quality of TPA that is sold on the merchant market to PET resin producers in the United States. PET resin lines can use other qualities of TPA other than PTA; however, if non-purified forms of TPA are used in

(*continued*...)

chemical monoethylene glycol ("MEG")[44] in a melt-phased polymerization treatment. Firms manufacture packaging-grade PET resin by submitting AMPET resin to a solid-state polymerization ("SSP") treatment. In both the domestic industry and the subject country foreign industries, PET resin producers have both the melt-phase polymerization capability to produce AMPET and the solid-state polymerization capability to produce PET resin.

Packaging-grade PET resin is produced by submitting AMPET resin to a SSP treatment, which increases the IV of the polyester pellet to a level within the range of IVs as defined within the scope of these investigations. The amorphous chip's raw material feedstocks, PTA and MEG, are based on xylene[45] and ethylene, respectively, from the petrochemical industry; thus, PTA and MEG feedstock prices for the manufacture of AMPET resin are variably dependent upon prices in the larger petrochemical industry. PTA and MEG account for approximately 98 percent of precursor AMPET resin by weight and an estimated 75 to 80 percent of final PET resin by cost. AMPET resin producers can modify polymer properties by incorporating nominal amounts of copolymer chemical reactants such as isophthalic acid ("IPA") at levels of 2 to 3 percent by weight.[46]

An SSP treatment essentially bakes the AMPET resin chips in large cylindrical reaction towers. In these towers the AMPET chips flow through an oxygen-free, nitrogen gas atmosphere at temperatures above 200°C for a period of 18-24 hours. Once the baking is completed, the resin pellets exit the bottom of the reaction tower where air cooling takes place in a closed circuit heat exchanger prior to storage for transport by rail or truck.[47] Some PET resin producers are partially vertically integrated between feedstocks and PET resin production, while others are not.[48]

Some U.S. producers utilize a Melt to Resin ("MTR") process in their manufacturing, which is different from the conventional SSP technology.[49] In MTR technology, no solid state

(…*continued*)
PET resin manufacturing, the PET resin lines must compensate for the lower quality raw material input through further in-line chemical processing.

[44] Also referred to as EG, or ethylene glycol.

[45] Elevated process in Q3 2017 associated with production caused by Hurricane Harvey fell in Q4 2017 and continued decreasing Q1 2018. ICIS, "OUTLOOK '18: US MX to soften, trade deficit to increase in 2018," https://www.icis.com/resources/news/2017/12/27/10176348/outlook-18-us-mx-to-soften-trade-deficit-to-increase-in-2018/?redirect=english, retrieved August 2, 2018.

[46] Copolymer resin is usually demanded by consumers because of improved processing speed and physical properties. Homopolymers define unmodified forms of PET resin.

[47] Nitrogen gas of high purity is typically produced onsite by air liquefaction and distillation.

[48] Hearing transcript, p. 94 (McNaull), p. 95 (Freeman), and pp. 94-95 (Muthukuman).

[49] Uhde Inventa-Fischer, "MTR Melt-To Resin Technology for cost-efficient, energy saving production of high-quality PET," https://www.thyssenkrupp-industrial-solutions.com/media/products_services/chemical_plants_processes/polymer_plants/brochure_pet.pdf, retrieved August 2, 2018.

crystallizer is used, which saves on the cost of that equipment.[50] [51] The MTR process has lower residence time, resulting in minimal generation of secondary products and cross linked polymers (16 hour residence times vs. the conventional 24 hours), more stable parameters lower crystallinity, lower temperature processing, spherical pellet output compared to cylinder shaped output which leads to lower dust generation and lower IV drop during downstream processing, a more narrow processing window due to narrow molecular weight distribution and improved process ability, lower thermal heat stress, and energy cost savings.[52]

DOMESTIC LIKE PRODUCT ISSUES

No issues with respect to domestic like product have been raised in these investigations.

[50] Plastemart, "A new technology offers cost benefit to PET producers," http://www.plastemart.com/upload/Literature/New-technology-offers-cost-benefit-to-PET-producers.asp, retrieved August 2, 2018.

[51] Uhde Inventa-Fischer, "MTR Melt-To Resin Technology for cost-efficient, energy saving production of high-quality PET," https://www.thyssenkrupp-industrial-solutions.com/media/products_services/chemical_plants_processes/polymer_plants/brochure_pet.pdf, retrieved August 2, 2018.

[52] Uhde Inventa-Fischer, "MTR Melt-To Resin Technology for cost-efficient, energy saving production of high-quality PET," https://www.thyssenkrupp-industrial-solutions.com/media/products_services/chemical_plants_processes/polymer_plants/brochure_pet.pdf, retrieved August 2, 2018.

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PART II: CONDITIONS OF COMPETITION IN THE U.S. MARKET

U.S. MARKET CHARACTERISTICS

PET resin is used in four main downstream applications: bottles for soft drinks and other beverages, sheets for making clam shells for fruit and vegetable packaging, carpet fibers, and strapping used to ship bulk products, such as lumber.[1] The largest single end use is the manufacture of beverage bottles. The U.S. market for PET resin is supplied by U.S. producers as well as numerous import sources. Apparent U.S. consumption of PET resin increased during 2015-17. Overall, apparent U.S. consumption in 2017 was 10.8 percent higher than in 2015, but was 0.8 percent lower in January-March ("interim") 2018 than in January-March 2017.

Demand for PET resin has been growing, and is forecasted to continue growing, driven by the increasing trend of replacing traditional glass packaging with that of PET packaging.[2] PET bottles are in high demand because they are easy to handle, shatterproof, and convenient for "on-the-go" consumption of beverages. Historically, carbonated soft drinks have had the highest demand as an end-use segment of PET resin. However, consumer trends have largely shifted due to health concerns tied to the consumption of high-sugar content carbonated drinks. The PET water bottle segment is growing and is expected to soon represent the largest segment of the PET resin market.[3] In addition, recycled PET resin ("R-PET") demand has created more opportunity for recyclers, resulting in strong demand for R-PET, where interest largely is from the U.S. fiber industry.[4]

U.S. PURCHASERS

The Commission received 25 usable questionnaire responses from firms that bought PET resin during 2015-17.[5] Twenty-two of these purchasers indicated that they are end users,

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[1] *Polyethylene Terephthalate (PET) Resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan,* Inv. Nos. 731-TA-1387-1391 (Preliminary), USITC Publication 4740, November 2017, p. II-1.

[2] Plastemart, "Global Polyethylene Terephthalate demand estimated to reach US$38,014 mln by 2023," June 7, 2017, http://www.plastemart.com/news-plastics-information/global-polyethylene-terephthalate-demand-estimated-to-reach-us$38-014-mln-by-2023/44099 retrieved August 27, 2018.

[3] Plastics Insight, "Global Polyethylene Terephthalate (PET) Resin Market," November 10, 2016, https://www.plasticsinsight.com/global-pet-resin-market/ retrieved August 27, 2018.

[4] ICIS, "OUTLOOK '18: Supply crunch could keep US PET market firm amid antidumping bankruptcy cases," January 8, 2018, https://www.icis.com/resources/news/2018/01/08/10172598/outlook-18-supply-crunch-could-keep-us-pet-market-firm-amid-antidumping-bankruptcy-cases/, retrieved August 27, 2018.

[5] All 25 responding purchasers reported purchasing domestic PET resin, 9 purchased subject imports from Brazil, 4 purchased subject imports from Indonesia, 6 purchased subject imports from Korea, 8 purchased subject imports from Pakistan, 12 purchased subject imports from Taiwan, and 20 purchased imports of PET resin from other sources.

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including 15 bottle and bottle preform makers,[6] 3 sheet and strapping makers, 3 carpet makers, and 1 *** maker; and 3 are distributors. Responding U.S. purchasers were located nationwide. The largest responding purchasers of PET resin in order of size were ***.[7] During 2017, responding purchasers purchased 81.6 percent of their PET resin from U.S. producers, and purchased or imported 10.1 percent from subject countries (3.2 percent from Brazil, 1.0 percent from Indonesia, 0.9 percent from Korea, 2.1 percent from Pakistan, and 2.9 percent from Taiwan), and 8.3 percent from nonsubject countries.

Respondents claim that purchasers that purchase over 200 million pounds of PET resin annually are large purchasers. Ten of the 25 responding purchasers reported purchasing more than this amount. Respondents estimated that large purchasers represented over 80 percent of demand in the PET resin market.[8]

CHANNELS OF DISTRIBUTION

U.S. producers and importers from all subject countries except Taiwan sold mainly to end users, as shown in table II-1. Imports from Taiwan were mainly sold to *** during 2015 and 2016, were sold *** in 2017, and were sold mainly to *** in the interim periods of 2017 and 2018. In most years, bottle producers were the single largest end-use channel for U.S. producers and for most subject imports. According to U.S. producer DAK, the distribution system is not dependent on the end-use application.[9]

Table II-1
PET resin: U.S. producers' and importers' U.S. commercial shipments, by sources and channels of distribution, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

GEOGRAPHIC DISTRIBUTION

All U.S. producers reported selling PET resin to all regions in the contiguous United States (table II-2). Subject imports were also reportedly sold to all U.S. regions, but of the individual subject countries, only product from Brazil and Korea were sold to all regions (except "Other"). Importers from Brazil and Pakistan reported selling mainly to the Northeast and Southeast, while importers from Indonesia, Korea, and Taiwan reported selling mainly to the Pacific Coast. For U.S. producers, 13.2 percent of sales were within 100 miles of their production facility, 59.2 percent were between 101 and 1,000 miles, and 27.5 percent were over 1,000 miles. Importers sold 56.8 percent within 100 miles of their U.S. point of shipment, 41.7 percent between 101 and 1,000 miles, and 1.6 percent over 1,000 miles.

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[6] Preforms are used to produce bottles and many purchasers reported producing both PET bottles and preforms.

[7] ***.

[8] Hearing transcript, p. 232 (Ream).

[9] Conference transcript, p. 58 (McNaull).

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Table II-2
PET resin: Geographic market areas in the United States served by U.S. producers and importers

Region	U.S. producers	Brazil	Indonesia	Korea	Pakistan	Taiwan
Northeast	4	4	***	***	3	1
Midwest	4	2	***	***	2	---
Southeast	4	4	***	***	4	1
Central Southwest	4	1	***	***	---	---
Mountain	4	1	***	***	---	1
Pacific Coast	4	1	***	***	2	5
Other[1]	2	---	***	***	---	1
All regions (except Other)	4	1	***	***	---	---
Reporting firms	4	4	2	5	4	5

[1] All other U.S. markets, including AK, HI, PR, and VI.

Source: Compiled from data submitted in response to Commission questionnaires.

SUPPLY AND DEMAND CONSIDERATIONS

U.S. supply

Table II-3 provides a summary of the supply factors regarding PET resin from U.S. producers and from subject countries. Foreign producers in *** have increased their capacity for PET resin. U.S. producers' overall capacity was much higher than that of individual subject countries and capacity utilization levels were lower than that of most subject countries. Almost all U.S. producers' shipments went to the domestic market. Most Brazilian producers' shipments were also to their home market, while the majority of other foreign producers' shipments were to export markets. Two of four U.S. producers and 3 of 11 foreign producers reported being able to switch production from PET resin to alternative products.[10]

[10] U.S. producer *** reported being able to switch to non-packaging grade PET, and U.S. producer *** reported being able to switch to film and tray resin. Of the responding foreign producers, *** reported being able to switch to recycled materials and different dimensions, *** reported being able to switch to film grade chips, and *** reported being able to switch production to textile grade resin and film grade resin.

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Table II-3

PET resin: Supply factors that affect the ability to increase shipments to the U.S. market

Country	Capacity (million pounds)		Capacity utilization (percent)		Ratio of inventories to total shipments (percent)		Shipments by market, 2017 (percent)		Able to shift to alternate products
	2015	2017	2015	2017	2015	2017	Home market shipments	Exports to non-U.S. markets	No. of firms reporting "yes"
United States	***	***	***	***	***	***	***	***	2 of 4
Brazil	***	***	***	***	***	***	***	***	*** of 2
Indonesia	***	***	***	***	***	***	***	***	1 of 3
Korea	***	***	***	***	***	***	***	***	0 of 3
Pakistan	***	***	***	***	***	***	***	***	*** of 1
Taiwan	***	***	***	***	***	***	***	***	*** of 2

Note.--Responding U.S. producers accounted for all known U.S. production of PET resin in 2017. Responding foreign producer/exporter firms accounted for all known U.S. imports of PET resin from Brazil during 2017. Responding foreign producer/exporter firms did not report their share of imports from Indonesia but reported that they accounted for *** PET resin production in Indonesia during 2017. Responding foreign producer/exporter firms accounted for more than 75 percent of U.S. imports of PET resin from Korea during 2017. Responding foreign producer/exporter firms accounted for all of U.S. imports of PET resin from Pakistan during 2017. Responding foreign producer/exporter firms accounted for less than half of U.S. imports of PET resin from Taiwan during 2017. For additional data on the number of responding firms and their share of U.S. production and of U.S. imports from each subject country, please refer to Part I, "Summary Data and Data Sources."

Source: Compiled from data submitted in response to Commission questionnaires.

Domestic production

Based on available information, U.S. producers of PET resin have the ability to respond to changes in demand with moderate changes in the quantity of shipments of U.S.-produced PET resin to the U.S. market. The main contributing factors to this degree of responsiveness of supply are some availability of unused capacity and inventories. Factors mitigating responsiveness of supply include very limited ability to shift shipments from alternate markets and limited ability to shift production to or from alternate products.

U.S. producers' capacity fell from 2015 to 2017, reflecting the shutdown of M&G's facility in late 2017. U.S. producers' production increased slightly from 2015 to 2016, and then decreased by a similar amount in 2017. Exports were a very small share of U.S. producers' shipments. U.S. producers reported exports to Argentina, Canada, Colombia, Mexico, and Venezuela. Other products that producers reportedly can produce on the same equipment as PET resin are non-packaging grade PET, and film and tray resin. More information regarding domestic production are presented in Part III.

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Subject imports from Brazil

Based on available information, producers of PET resin in Brazil have the ability to respond to changes in demand with large changes in the quantity of shipments of PET resin to the U.S. market. The main contributing factors to this degree of responsiveness of supply are increasing capacity and increased availability of unused capacity. In 2017, Brazil's reported capacity was larger than that reported for any other subject country, and it increased by approximately *** percent from 2015 to 2017. Factors mitigating responsiveness of supply include relatively low inventories, a limited ability to shift shipments from alternate markets, and ***. The vast majority of Brazil's PET resin shipments were sold to the Brazil home market while export shipments to markets other than the United States were a relatively small share (*** percent) of total shipments.

Subject imports from Indonesia

Based on available information, producers of PET resin from Indonesia have the ability to respond to changes in demand with small-to-moderate changes in the quantity of shipments of PET resin to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity and the ability to shift shipments from alternate markets. ***. The majority of Indonesian producers' shipments are to export markets, with *** percent of total shipments going to export markets other than the United States. Factors mitigating supply responsiveness included limited capacity, and relatively low inventories. Indonesia had the second-lowest production capacity in 2017 among the subject countries (only Pakistan had lower capacity). Indonesian producers' production capacity remained virtually unchanged from 2015 to 2017.

Subject imports from Korea

Based on available information, producers of PET resin from Korea have the ability to respond to changes in demand with moderate-to-large changes in the quantity of shipments of PET resin to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the moderate availability of unused capacity, and the ability to shift shipments from alternate markets. The majority of Korean producers' shipments are to export markets, with *** percent of total shipments sold to export markets other than the United States. A factor mitigating responsiveness of supply is low inventories.

Subject imports from Pakistan

Based on available information, producers of PET resin from Pakistan have the ability to respond to changes in demand with small-to-moderate changes in the quantity of shipments of PET resin to the U.S. market. The main contributing factors to this degree of responsiveness of supply are some ability to shift shipments from alternate markets, ***, ***, and some limited unused capacity. The majority of Pakistani producers' shipments are to export markets, with *** percent of total shipments sold to export markets other than the United States. Factors

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mitigating responsiveness of supply include limited capacity and declining inventories as a ratio to total shipments. Pakistan had the lowest production capacity of the subject countries in 2017, although capacity grew by *** percent from 2015 to 2017.

Subject imports from Taiwan

Based on available information, producers of PET resin from Taiwan have the ability to respond to changes in demand with moderate-to-large changes in the quantity of shipments of PET resin to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the ability to shift shipments from alternate markets, capacity growth of approximately *** percent from 2015 to 2017, and a reported ability to shift production to an alternate product (***). The vast majority of Taiwan producers' shipments were to export markets, with *** percent of total shipments sold to export markets other than the United States. Factors mitigating responsiveness to supply include very limited unused capacity and moderate inventories.

Imports from nonsubject sources

Imports of PET resin from nonsubject sources accounted for 7.3 percent of apparent U.S. consumption in 2017. The largest sources of such imports during 2015-17 were Mexico and Canada, accounting for *** percent and *** percent, respectively, of apparent U.S. consumption in 2017. Combined, imports of PET resin from these two countries accounted for *** percent of all such imports from nonsubject sources in 2017.

Supply constraints

None of the four U.S. producers and 4 of 13 importers reported that their firm had refused or been unable to supply any customers since January 1, 2015. Importers reported supply disruptions because of weather, port congestion (and other port disruptions), problems obtaining the input PTA, and limited supply from ***. Table II-4 provides the narrative responses of the firms that report supply constraints.

Table II-4
PET resin: Narratives provided by firms reporting supply constraints since January 1, 2015

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Most purchasers (19 of 25) reported supply constraints (table II-4). Ten purchasers reported that the M&G bankruptcy caused supply disruptions. Thirteen purchasers[11] reported that suppliers are unable to provide the requested PET resin, are refusing to bid on business, or are providing short shipments. Other purchasers reported a number of issues caused by supply constraints including: prior and current antidumping petitions and rulings restricting options for U.S. consumers and made imports more costly in 2017; many customers are on allocation from U.S. producers; delayed deliveries; material not available because of hurricanes or floods; and U.S. prices for PET resin are the highest in the world.[12]

Petitioners report there was a supply shortage "for a short period of time in late {2017} into early 2018"[13] caused by M&G's idling of production at its West Virginia plant.[14] DAK reported it had "experienced no supply constraints whatsoever" during the period of investigation[15] and that customers rejected offers "and in some cases … shut their operations rather than pay … a fair market price… during the period in which they claim… shortages."[16] Nan Ya reported that it increased production to replace M&G's product but customers decided not to purchase because of price.[17] Indorama reported it "never short supplied any customer or put them on allocation because of the closure of M&G's facility."[18] Petitioners report that the Mexican plant in Alta Mira previously owned by M&G was closed for six to seven weeks[19] and that the Brazilian plant that had been owned by M&G "never stopped producing."[20]

Respondents claim that U.S. producers have been unable or unwilling to provide U.S.-produced PET resin when it was requested. PepsiCo reported that U.S. producers were unable to provide it with all the PET resin it required "even at a premium price."[21] Because of this shortage, PepsiCo started purchasing imported PET resin from Taiwan.[22] PepsiCo reported that when it placed orders with U.S. producers, the producers supplied it with imported product. In addition, it reported one U.S. supplier "requested that we approve qualified PET from Turkey and Thailand to cover U.S. supply shortfalls going forward."[23]

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[11] Six of these purchasers specifically reported that U.S. producers had limited supply and one purchaser specifically mentioned imports because of duties had limited supplies. The remaining six purchasers did not report if the suppliers were domestic producers or importers.

[12] *** also reported that U.S. producers claim losses on PET resin while capturing profits on PTA feedstocks.

[13] Hearing transcript, p. 118 (Rosenthal).

[14] The idling of production resulted from M&G's inability to pay its raw material suppliers, who then stopped supplying the raw materials to M&G. Conference transcript, p. 33 (Fournier); pp. 88, 90 (Rosenthal).

[15] Hearing transcript, p. 39 (Cullen).

[16] Hearing transcript, p. 82 (Cullen).

[17] Hearing transcript, pp. 82-83 (Freeman).

[18] Hearing transcript, p. 83 (Paramasivam).

[19] Hearing transcript, p. 55 (Rosenthal).

[20] Hearing transcript, p. 56 (Rosenthal).

[21] Hearing transcript, p. 139 (Berry).

[22] Hearing transcript, pp. 139-140 (Berry).

[23] Hearing transcript, p. 140 (Berry).

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Graham Packaging (a large purchaser of PET resin)[24] reported that it seeks to purchase 95 percent U.S. product; however, 25 percent of its purchases are imports because U.S. producers fill orders with imports from their foreign affiliates.[25] Graham reported that M&G stopped shipping and "every other U.S. producer limited the amount of PET they offered to supply us in the last year" "because they had nothing available to sell," and it "could not obtain sufficient additional volume even at significantly higher prices."[26] Graham reported that Pactiv {a sister company of Graham}[27] could "not get a single U.S. producer to quote in response to an RFQ for 2018 supply for one of its plants in North Carolina" and that "we got a request from {a} petitioner two days ago asking us to certify PET at an additional non-subject country."[28] Graham also reported that there had been other supply difficulties during 2015-17. Flooding from Hurricane Matthew in October 2016 led DAK to declare a force majeure and flooding from Hurricane Harvey in September to November 2017 disrupted raw material suppliers.[29]

Niagara (***) reported that it had been put on allocation, had been short-shipped, and had orders with U.S. producers fulfilled with imported product.[30] Due to the difficulties it has had buying domestic product it claimed that the "principal beneficiaries of antidumping duty orders will be producers of nonsubject PET resin."[31] Furthermore, Niagara reported that it pays "a premium for imported material"[32] rather than paying less for it.

New suppliers

Thirteen of 25 responding purchasers indicated that new suppliers have entered the U.S. market since January 1, 2015. Purchasers cited new suppliers APG Polytech (India), Ekopolimers (Russia), FENC (U.S. and Vietnam), Formosa (Vietnam), Gatronova Resins (India), Hosaf (South Africa), Indorama (Thailand), JBF (United Arab Emirates), Koksan PET (Turkey), LeaLea (Taiwan), PQS (Brazil), PSL (Pakistan), Recron (Malaysia), Reliance (India), and ShinKong (Taiwan). Purchasers also reported that DAK acquired the production rights of M&G's Mexican facilities and purchased Selenis's plant in Canada. *** reported that the M&G closure triggered a supply crisis that led to product becoming increasingly available from new sources.

U.S. demand

Based on available information, the overall demand for PET resin is likely to experience small-to-moderate changes in response to changes in price. The main contributing factors are the somewhat limited range of substitute products and the large cost share of PET resin in most

[24] Hearing transcript, p. 144 (Ream).
[25] Hearing transcript, p. 144 (Ream).
[26] Hearing transcript, p. 146 (Ream).
[27] Hearing transcript, p. 144 (Ream).
[28] Hearing transcript, p. 148 (Ream).
[29] Hearing transcript, p. 149 (Ream).
[30] Hearing transcript, pp. 151-152 (Safieddin).
[31] Hearing transcript, p. 156 (Safieddin).
[32] Hearing transcript, p. 154 (Safieddin).

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of its end-use products. Demand for PET resin is derived from the demand for its end-use products, such as carbonated soda bottles and water bottles, as well as other containers and products (including strapping and sheet) that are made of PET resin.

End uses and cost share

U.S. demand for PET resin depends on the demand for U.S.-produced downstream products. Reported end uses include bottles of various types (e.g., water or carbonated beverages), sheets, carpets, strapping, and thermoformed plastic containers. PET resin in bottles can be either cold-fill (i.e., for bottles meant to be filled with cold liquids) or hot-fill (i.e., for bottles that can be filled with hot liquids).[33]

PET resin accounts for a large share of the cost of the intermediate products in which it is used, but a smaller share of the ultimate end-use products. For example, PET resin is a smaller share of the cost of a bottled beverage than the share of the cost of a bottle alone. Reported cost shares of PET resin for some end uses were as follows:[34]

- Empty bottles and preforms: 29 to 85 percent (11 of 14 firms reported 60 percent or higher).
- Bottles/containers: 20 to 70 percent (8 of 15 firms reported 37 percent or lower).[35]
- Filled containers: 10 to 75 percent (6 of 7 firms reported 40 percent or lower).
- Carpets: 28 to 96 percent (7 of 8 firms reported 60 percent or lower).
- Strapping and sheets: 57 to 96 percent (7 of the 13 firms reported 80 percent or higher).
- Other uses: 60 to 97 percent.[36]

Business cycles

One of 4 U.S. producers, 10 of 16 importers, and 21 of 25 purchasers indicated that the U.S. PET resin market was subject to business cycles. Most of these firms reported higher PET resin demand during the summer because of higher demand for bottled beverages. One producer, 10 importers, and 10 purchasers reported distinctive conditions of competition, including supply being driven by large new facilities, an artificially high price of feedstock PTA in

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[33] *Polyethylene Terephthalate (PET) Resin from Canada, China, India, and Oman*, Inv. Nos. 701-TA-531-532 and 731-TA-1270-1273 (Final), USITC Publication 4604, April 2016, p. II-11; conference transcript p. 56 (Cullen), p. 66 (Paramasivam).

[34] Producers and importers were asked to report the cost shares for five products: empty bottles, filled bottles, carpets, sheets, and strapping, as well as other end uses. Purchasers were asked to report their own end uses and did not always distinguish between empty and filled bottles.

[35] The question did not specify whether the cost share was for unfilled or filled bottles. Three firms reported the cost share for other food containers, ranging from 30 to 70 percent.

[36] Other end uses included internal research (60 percent), cups (70 percent), automotive products (75 percent), cleaning products (75 percent), and yarn (97 percent).

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the U.S. market, restricted imports, capacity constraints, imports being uncompetitive over 300 miles from ports, and the impact of M&G's shutdown.

Both responding U.S. producers, 10 of 13 responding importers, and 16 of 24 responding purchasers reported that conditions of competition had changed since 2015. U.S. producer *** reported that overseas producers have substantially increased their capacity, and have directed this surplus capacity towards the United States. U.S. producer ***, and importers *** reported that M&G's recent cessation of production at a number of its plants has caused supply shortages and increased demand for imported PET resin. Ten purchasers reported that M&G's bankruptcy disrupted supply or caused shortages. Some purchasers also reported that the expected increase in capacity from the expected opening of M&G's Corpus Christi facility had caused increasing competition in the U.S. market or reduced investment in plants that firms were planning to close when the new plant began to operate. Importers and purchasers reported other changes as well, including: frequent supply constraints since mid-2017; fluctuation in raw material prices affected PET resin prices; problems due to natural disasters; limited purchases of imported PET resin in the interior United States (further than 300 miles from a U.S. port) due to high logistics costs, which have been recently exacerbated by a tightening of the U.S. trucking market; and that recent antidumping duties on nonsubject imports affected U.S. market supply.[37]

Demand trends

Almost all responding firms reported an increase in U.S. demand for PET resin from 2015 to 2016 (table II-5) and since 2017 (table II-6). DAK testified that there has been good growth across almost all the end-use segments except for carbonated soft drink bottles because of consumers' desire to consume fewer calories. Respondents further stated that the water bottle end-use segment has grown the most.[38]

[37] ***.

[38] Conference transcript, p. 75 (Cullen).

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Table II-5
PET resin: Firms' responses regarding U.S. demand and demand outside the United States from 2015 to 2016

Item	Increase	No change	Decrease	Fluctuate
Overall demand in the United States				
U.S. producers	4	---	---	---
Importers	11	3	---	1
Purchasers	21	2	---	1
Bottler demand in the United States				
U.S. producers	4	---	---	---
Importers	12	2	---	1
Purchasers	15	1	1	1
Other end user demand in the United States				
U.S. producers	4	---	---	---
Importers	11	2	---	1
Purchasers	12	1	---	2
Overall demand outside the United States				
U.S. producers	3	---	---	---
Importers	11	1	---	1
Purchasers	15	1	---	1
Demand for end use products				
Purchasers	15	4	2	---

Source: Compiled from data submitted in response to Commission questionnaires.

Table II-6
PET resin: Firms' responses regarding U.S. demand and demand outside the United States since 2017

Item	Increase	No change	Decrease	Fluctuate
Overall demand in the United States				
U.S. producers	3	---	---	---
Importers	11	2	---	---
Purchasers	21	1	1	1
Bottler demand in the United States				
U.S. producers	3	---	---	---
Importers	12	1	---	---
Purchasers	16	---	1	1
Other end user demand in the United States				
U.S. producers	3	---	---	---
Importers	11	2	---	---
Purchasers	13	---	---	1
Overall demand outside the United States				
U.S. producers	3	---	---	---
Importers	12	1	---	---
Purchasers	16	---	1	1
Demand for end use products				
Purchasers	14	4	3	1

Source: Compiled from data submitted in response to Commission questionnaires.

Substitute products

Substitutes for PET resin are limited. All four U.S. producers, 10 of 15 importers, and 14 of 23 purchasers reported that there were no substitutes. Importers and purchasers listed

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aluminum, cotton, glass, HDPE, and HEDP, nylon, other polymers, paper, polyolefin resin, polypropylene, polystyrene, and recycled PET resin as substitutes for PET resin in certain applications.

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported PET resin depends upon such factors as relative prices, quality (e.g., grade standards, etc.), and conditions of sale (e.g., availability, price discounts/rebates, lead times between order and delivery dates, reliability of supply, product services, etc.). Based on available data, staff believes that there is a high degree of substitutability between domestically produced PET resin and PET resin imported from subject sources.

Lead times

PET resin is primarily sold from inventory. U.S. producers reported that 81.3 percent of their sales came from inventories, with lead times averaging 18 days, and the remainder were produced-to-order, with lead times averaging 20 days. Importers reported that 86.2 percent of their commercial shipments came from U.S. inventories with lead times averaging 18 days, 8.7 percent were produced-to-order with lead times averaging 63 days, and 5.1 percent came from foreign inventories, with lead times averaging 42 days.

Knowledge of country sources

All responding purchasers indicated they had marketing/pricing knowledge of domestic PET resin, 10 of Brazilian PET resin, 10 of Indonesian PET resin, 10 of Korean PET resin, 10 of Pakistani PET resin, 14 of PET resin from Taiwan, and 17 of PET resin from nonsubject countries.[39]

Purchasers were asked if they or their customers always, frequently, sometimes, or never based their purchasing decisions on the producer or the country of origin of the PET resin. As shown in table II-7, slightly more than half of purchasers (13 of 25) reported that they sometimes or never make purchase decisions based on the producer, but 12 purchasers reported that they always or usually make decisions based on the producer. Most purchasers (16 of 25) reported that they sometimes or never make purchase decisions based on the country of origin. Almost all purchasers reported that their customers sometimes or never make purchase decisions based on producer or country of origin. Purchasers' reasons that they make decisions based on the manufacturer include: a preference for products made in America, business relationships, quality, price, diversity of supply, and limited availability from U.S. producers. Purchasers' customer's decisions were reportedly based on supplier diversity and resin quality requirements. Purchasers' reasons for making decisions based on country of origin

[39] Nonsubject countries listed included Argentina, Belgium, Canada, China, Egypt, India, Lithuania, Malaysia, Mexico, Oman, Portugal, Russia, Saudi Arabia, Thailand, Turkey, UAE, Vietnam, and "EU countries."

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included: price, availability, stability of foreign producer, lead times, cost to transport to the United States, NAFTA rules, business relationships, quality, and diversity of supply.

Table II-7
PET resin: Purchasing decisions based on producer and country of origin

Purchaser/Customer decision	Always	Usually	Sometimes	Never
Purchaser makes decision based on producer	6	6	6	7
Purchaser's customers make decision based on producer	---	1	8	12
Purchaser makes decision based on country	4	5	8	8
Purchaser's customers make decision based on country	---	---	9	12

Source: Compiled from data submitted in response to Commission questionnaires.

Factors affecting purchasing decisions

The most often cited top three factors firms consider in their purchasing decisions for PET resin were price (22 firms), quality (20 firms), and availability (17 firms) as shown in table II-8. Quality was the most frequently cited first-most important factor, however, (cited by 12 firms), followed by price (6 firms); availability/lead times was the most frequently reported second-most important factor (10 firms); and price was the most frequently reported third-most important factor (9 firms).

Table II-8
PET resin: Ranking of factors used in purchasing decisions as reported by U.S. purchasers, by factor

Factor	First	Second	Third	Total
Price	6	7	9	22
Quality	12	7	1	20
Availability/lead times	3	10	4	17
Terms/credit terms	0	1	5	6
Logistics/on time	0	0	3	4
Consistency	0	1	2	2
Other[1]	4	0	1	5

[1] Other first factors included contracts, FDA compliance, and "direct vs. toll" (where the purchasers' customers negotiate the price of PET resin instead of the purchaser). and suitability of specifications; "other" third most important factor was technical support.

Source: Compiled from data submitted in response to Commission questionnaires.

Most purchasers (14 of 25) reported that they usually purchase the lowest-priced product. Ten purchasers reported sometimes purchasing the lowest-priced product and one reported always purchasing the lowest-priced product.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 16 factors in their purchasing decisions (table II-9). All 25 purchaser rated availability as very important. Other factors rated as very important by more than half of responding purchasers were product consistency (24), reliability

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of supply (23), price (22), quality meets industry standards (22), delivery time (21), delivery terms (19), extension of credit (16), technical support and services (14), U.S. transportation costs (14), discounts offered (13), and quality exceeds industry standards (13). More purchasers (7) reported that minimum quantity requirements were not important than reported them as very important (6).

Table II-9
PET resin: Importance of purchase factors, as reported by U.S. purchasers, by factor

Factor	Very important	Somewhat important	Not important
Availability	25	---	---
Product consistency	24	1	---
Reliability of supply	23	2	---
Price	22	3	---
Quality meets industry standards	22	3	---
Delivery time	21	4	---
Delivery terms	19	6	---
Extension of credit	16	6	3
Technical support/service	14	6	5
U.S. transportation costs	14	10	1
Discounts offered	13	11	1
Quality exceeds industry standards	13	9	3
Delivery by rail	10	8	7
Packaging	6	17	2
Minimum quantity requirements	6	12	7
Product range	4	17	4

Source: Compiled from data submitted in response to Commission questionnaires.

Supplier certification

Twenty-three of 25 responding purchasers require that their suppliers become certified or qualified to sell PET resin to their firm.[40] Purchasers reported that the time to qualify a new supplier ranged from two days to a year, with 12 of 22 responding purchasers reporting 60 days or fewer. Qualification requirements varied by firm but included: ability to run on equipment (trial run on equipment), quality (adherence to specifications, lab tests, food safety, performance of packaging produced, regulatory compliance, stability, shelf life, clarity, and taste), customer acceptance, producer's conditions (financials, production system audit, system for ordering, payments terms, and service), and logistics.

Three purchasers reported that a domestic or foreign supplier had failed in its attempt to qualify PET resin, or had lost its approved status since 2015. Producers that failed to qualify or lost qualification included DAK USA, EIPET (Egypt), Indorama Mexico, Indorama USA, JBF RAK (UAE), M&G USA, and Octal (Oman).

[40] One of the two firms reporting no certification requirement explained that PET resin must be FDA approved.

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Purchaser PepsiCo stressed the importance of supply security, and stated that to maintain supply security, it attempts to purchase all its PET resin from U.S. production (except for product for Hawaii which is imported for logistical reasons).[41]

Changes in purchasing patterns

Purchasers were asked about changes in their purchasing patterns from different sources since 2015 (table II-10). Purchasers reporting increased purchases of U.S.-produced product explained that this was because of growth in the volume of their consumption; reasons for decreased domestic purchases included limited availability of domestic product and that suppliers chose to supply the purchasers with imports rather than their U.S.-produced PET resin.

Table II-10
PET resin: Changes in purchase patterns from U.S., subject, and nonsubject countries

Source of purchases	Did not purchase	Decreased	Increased	Constant	Fluctuated
United States	---	5	12	2	5
Brazil	12	4	3	---	2
Indonesia	15	1	2	---	1
Korea	13	---	4	---	2
Pakistan	12	1	5	---	1
Taiwan	8	2	6	---	3
Other	5	2	8	2	4

Source: Compiled from data submitted in response to Commission questionnaires.

Purchasers increased their purchases from Brazil as a result of availability, logistics, and domestic suppliers' choice to provide the purchaser with Brazilian product, and decreased their purchases of Brazilian product because of the imposition of antidumping duties. One purchaser reported increased purchases of Indonesian product because of increased consumption. Purchasers reported increased purchases from Korea because of increased consumption, domestic shortages, availability, and price. Purchasers reported increased purchases from Pakistan because of domestic shortages, GSP status, availability, and price. Purchasers reported increased purchases from Taiwan because of domestic shortages, availability, continuity of supply, and diversifying portfolio. *** reported that it increased its purchases of PET resin from Taiwan dramatically in 2018, in spite of the ongoing case, because of the shortage caused by M&G's bankruptcy.

Most (17 of 25) responding purchasers reported that they had changed suppliers since January 1, 2015. Seven firms reported changing suppliers due to M&G's bankruptcy, and three other purchasers reported that they had difficulty getting U.S.-produced product from any

[41] Hearing transcript, pp. 137, 190 (Berry).

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source.[42] Two purchasers reported reducing purchases of imports because of the antidumping investigations. Firms also reported changing suppliers because of quality, price, availability, processing, contract disagreements, new suppliers, increased consumption, and suppliers closing or withdrawing from the market.

Thirteen of 25 responding purchasers reported new suppliers including, DAK (Canada and Mexico), Ekopolimers (Russia), FENC/APG Polytech (which purchased M&G's West Virginia facility), Formosa (Vietnam), Gatronova (India), Hosaf (Turkey), Indorama (Thailand), JBF Global (Europe), Kosan PET (Turkey), LeaLea (Taiwan), Octal (Oman), PSQ (Brazil), Reliance/Recron (Malaysia), ShinKong (Taiwan), Tainan (Taiwan), and South Africa (no producer listed).

Importance of purchasing domestic product

Nineteen of 25 purchasers reported that none of their purchases required U.S.-produced product.[43] No purchaser reported that domestic product was required by law for any of their purchases, three reported it was required by their customers (for 10 to 100 percent of their purchases), and three reported other preferences for domestic product (for 10 to 98 percent of their purchases). Reasons cited for preferring domestic product included: soft tolling contracts; price, freight, and technical services; and unique resin quality and additives developed for a special need.

Eight of 23 responding purchasers reported that they had ordered domestic product but were instead supplied imported product.[44] Three of these firms reported that imports replaced domestic product because of capacity constraints and one reported that *** and sold it as domestically produced product.

Seven of 24 responding purchasers reported that they had searched for domestic PET resin but had been offered imported product. Five firms reported that this reflected shortages of domestic product. One purchaser reported that ***.

Respondents claim that M&G increased its sales in preparation to the expected opening of its new facilities in Texas. According to respondents, M&G wanted to increase its sales to create a steady stream of orders for the new facility when it opened. M&G was not able to supply these orders from its U.S. production, according to respondents, and therefore sold PET resin made in M&G's facilities Brazil and Mexico.[45] Respondents claim that M&G and DAK competed on price in order to increase their sales in anticipation of their expected new capacity.[46]

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[42] Two of these three firms reported that they purchased imported PET resin because of the lack of availability of U.S. product, and one reported that because of this lack of availability it had not been able to purchase U.S.-produced PET resin and therefore had not changed its source of PET resin.

[43] Three other firms reported that 85 percent or more of their purchases had no domestic requirement.

[44] Two purchasers reported that they did not know: one reported it just orders PET resin, and the other reported that it does not know the source because its distributor repackages PET resin.

[45] Respondents' prehearing brief, pp. 6-8.

[46] Hearing transcript, p. 244 (Safieddin).

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Comparisons of domestic products, subject imports, and nonsubject imports

Purchaser comparison of factors between U.S.-produced and imported PET resin

Purchasers were asked a number of questions comparing PET resin produced in the United States, subject countries, and nonsubject countries. Purchasers were asked to rate individual countries on each factor on a 1 to 5 scale, with 5 indicating that PET resin produced in that country rates very well and 1 indicating that PET resin produced in that country does not rate very well for that factor. Table II-11 shows the ratings for U.S-produced PET resin compared to imports.[47] Factors are listed by order of importance (see table II-8).

A plurality of responding purchasers reported that Brazilian and U.S. product were comparable on eight factors and that U.S. product was superior for availability, delivery by rail, terms, delivery time, extension of credit, packaging, product range, and technical support/service, while a plurality reported that Brazil was superior on price. A plurality of purchasers reported U.S. and Indonesian product were comparable on eight factors, and that U.S. product was superior on delivery time, extension of credit, technical support and services, delivery by rail, packaging and product range and that Indonesian product was superior on price. Responses were inconsistent on availability, with two reporting U.S. availability was superior and two reporting it was inferior. A plurality of purchasers reported that U.S. and Korean product were comparable for nine factors, that U.S. product was superior for delivery time, delivery terms, extension of credit, technical support/service, delivery by rail, and product range, and that Korea was superior on price. A plurality of purchasers reported that U.S. and Pakistan product were comparable for nine factors and that U.S. product was superior for availability, reliability of supply, quality meets industry standard, delivery time, technical support/service, quality exceeds industry standard, delivery by rail, and product range. A plurality of purchasers reported that U.S. and Taiwan product were comparable for 10 factors and that U.S. product was superior for delivery time, delivery terms, extension of credit, delivery by rail, and packaging. Most reported that Taiwan product was superior for price.

[47] For each country pair, if the first listed country's rating was higher than the second country's rating, the first listed country's product was considered superior. If both countries had the same rating, the products were considered comparable. If the first listed country's rating was lower than the second country's rating, the first country's product was considered inferior.

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Table II-11
PET resin: Purchasers' comparisons between U.S.-produced and imported product

Factor	U.S. vs. Brazil			U.S. vs. Indonesia			U.S. vs. Korea			U.S. vs. Pakistan		
	S	C	I	S	C	I	S	C	I	S	C	I
Availability	4	1	3	2	1	2	3	5	1	6	3	1
Product consistency	1	5	2	2	3	---	1	5	2	3	5	1
Reliability of supply	2	5	1	2	3	---	4	4	1	5	5	---
Price[1]	2	2	4	1	1	2	2	1	5	2	4	3
Quality meets industry standards	2	5	1	2	3	---	2	6	---	7	3	---
Delivery time	7	1	---	5	---	---	8	---	1	9	1	---
Delivery terms	5	3	---	2	3	---	5	3	---	5	5	---
Extension of credit	5	2	1	3	2	---	6	3	---	4	5	1
Technical support/service	6	1	1	4	1	---	6	2	---	7	2	---
U.S. transportation costs[1]	2	4	1	1	2	1	3	3	1	2	3	3
Discounts offered	3	5	---	2	2	---	2	4	---	2	7	---
Quality exceeds industry standards	2	4	1	2	2	---	1	5	---	5	3	---
Delivery by rail	6	---	---	4	---	---	6	---	---	8	1	---
Packaging	4	4	---	3	2	---	3	5	---	4	5	---
Minimum quantity requirements	2	4	2	1	3	---	3	3	1	1	5	2
Product range	4	2	---	2	1	1	4	2	---	6	2	---

Factor	U.S. vs. Taiwan			U.S. vs. Canada			U.S. vs. Mexico			U.S. vs. all other sources		
	S	C	I	S	C	I	S	C	I	S	C	I
Availability	3	5	4	5	2	2	3	7	3	2	5	1
Product consistency	1	8	2	1	6	2	2	9	2	4	2	1
Reliability of supply	3	6	3	2	6	1	3	8	2	5	2	1
Price[1]	2	3	6	3	3	3	2	6	5	2	2	4
Quality meets industry standards	1	10	---	---	8	1	2	10	1	5	3	---
Delivery time	9	---	3	3	6	---	8	3	2	8	---	---
Delivery terms	5	4	2	3	4	2	3	8	2	5	3	---
Extension of credit	6	4	2	2	5	2	3	8	2	6	---	2
Technical support/service	3	8	---	3	6	---	3	10	---	5	2	---
U.S. transportation costs[1]	4	5	2	2	5	2	4	7	2	2	2	2
Discounts offered	1	7	1	2	7	---	1	10	2	2	6	---
Quality exceeds industry standards	---	8	2	---	8	1	2	9	2	2	4	---
Delivery by rail	10	---	---	4	2	2	5	5	2	7	---	---
Packaging	6	5	---	1	8	---	2	11	---	3	3	1
Minimum quantity requirements	2	7	1	3	4	2	2	9	2	2	3	2
Product range	4	6	---	5	3	---	3	9	---	5	1	---

[1] A rating of superior means that price/U.S. transportation cost is generally lower. For example, if a firm reported "U.S. superior," it meant that the U.S. product was generally priced lower than the imported product.

Note.--S=first listed country's product is superior; C=both countries' products are comparable; I=first list country's product is inferior.

Source: Compiled from data submitted in response to Commission questionnaires.

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Purchaser comparison of factors between subject countries

Table II-12 shows the ratings for the 16 factors from table II-8 for subject country pairs. A plurality of purchasers reported that the products were comparable for most factors for all country pairs.

Table II-12
PET resin: Purchasers' comparisons between imported PET resin from subject countries

Factor	Brazil vs. Indonesia			Brazil vs. Korea			Brazil vs. Pakistan			Brazil vs. Taiwan		
	S	C	I	S	C	I	S	C	I	S	C	I
Availability	---	2	1	2	2	1	2	2	1	1	1	3
Product consistency	1	2	---	2	2	1	2	2	1	2	1	2
Reliability of supply	1	2	---	2	2	1	2	2	1	1	1	3
Price[1]	1	2	---	3	2	---	2	2	1	2	3	---
Quality meets industry standards	---	3	---	2	2	1	2	3	---	1	2	2
Delivery time	1	2	---	---	3	2	1	3	1	---	1	4
Delivery terms	1	2	---	2	3	---	1	3	1	1	2	2
Extension of credit	1	2	---	1	4	---	1	3	1	---	3	2
Technical support/service	---	2	1	1	3	1	1	3	1	1	1	3
U.S. transportation costs[1]	2	1	---	2	2	---	1	3	1	1	4	---
Discounts offered	---	3	---	---	4	1	---	4	1	---	3	2
Quality exceeds industry standards	---	3	---	1	2	1	2	3	---	1	2	2
Delivery by rail	---	3	---	---	4	---	---	5	---	---	5	---
Packaging	1	2	---	1	4	---	1	3	1	1	4	---
Minimum quantity requirements	1	2	---	2	3	---	1	4	---	2	2	1
Product range	---	2	---	---	3	---	2	2	---	1	1	2
Factor	**Indonesia vs. Korea**			**Indonesia vs. Pakistan**			**Indonesia vs. Taiwan**			**Korea vs. Pakistan**		
	S	C	I	S	C	I	S	C	I	S	C	I
Availability	1	2	1	1	2	1	---	2	3	2	4	---
Product consistency	---	3	1	---	3	1	---	3	2	3	2	1
Reliability of supply	---	3	1	---	3	1	---	3	2	1	4	1
Price[1]	1	2	---	1	---	2	---	4	---	1	2	2
Quality meets industry standards	---	3	1	---	4	---	---	3	2	2	4	---
Delivery time	---	2	2	1	1	2	---	3	2	3	2	1
Delivery terms	---	4	---	---	3	1	---	3	2	---	5	1
Extension of credit	---	4	---	---	2	2	---	3	2	---	4	2
Technical support/service	1	2	1	1	2	1	---	3	2	1	3	2
U.S. transportation costs[1]	1	2	---	1	1	1	---	3	1	---	4	1
Discounts offered	---	2	1	---	2	1	---	3	1	1	3	1
Quality exceeds industry standards	---	2	1	---	3	---	---	2	2	2	3	---
Delivery by rail	---	3	---	---	3	---	---	4	---	---	5	---
Packaging	---	4	---	---	3	1	---	5	---	---	5	1
Minimum quantity requirements	---	3	---	---	2	1	1	3	---	---	4	1
Product range	---	3	---	1	2	---	1	2	1	2	3	---

Table continued on the next page.

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Table II-12--Continued
PET resin: Purchasers' comparisons between imported PET resin from subject countries

Factor	Korea vs. Taiwan			Pakistan vs. Taiwan		
	S	C	I	S	C	I
Availability	---	5	3	---	2	5
Product consistency	1	5	1	1	2	4
Reliability of supply	---	6	2	1	2	4
Price[1]	---	6	1	2	1	3
Quality meets industry standards	---	6	1	---	3	4
Delivery time	---	7	1	1	1	5
Delivery terms	---	5	2	1	4	2
Extension of credit	---	5	3	1	3	3
Technical support/service	---	5	2	1	3	3
U.S. transportation costs[1]	---	6	1	1	3	2
Discounts offered	---	5	1	1	3	2
Quality exceeds industry standards	---	5	1	---	2	4
Delivery by rail	---	6	---	---	6	---
Packaging	---	7	---	1	6	---
Minimum quantity requirements	---	5	1	1	4	1
Product range	1	3	2	---	3	3

[1] A rating of superior means that price/U.S. transportation cost is generally lower. For example, if a firm reported "U.S. superior," it meant that the U.S. product was generally priced lower than the imported product.

Note.--S=first listed country's product is superior; C=both countries' products are comparable; I=first listed country's product is inferior.

Source: Compiled from data submitted in response to Commission questionnaires.

Comparison of U.S.-produced and imported PET resin

In order to determine whether U.S.-produced PET resin can generally be used in the same applications as imports from Brazil, Indonesia, Korea, Pakistan, and Taiwan, U.S. producers, importers, and purchasers were asked whether the products can always, frequently, sometimes, or never be used interchangeably. As shown in table II-13, all U.S. producers and a large majority of importers reported that domestic and imported PET resin are always interchangeable. The majority of purchasers reported that PET resin from different countries is always or frequently interchangeable.

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Table II-13
PET resin: Interchangeability between PET resin produced in the United States and in other countries, by country pair

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of purchasers reporting			
	A	F	S	N	A	F	S	N	A	F	S	N
U.S. vs. subject countries:												
U.S. vs. Brazil	4	---	---	---	6	2	1	---	6	7	2	---
U.S. vs. Indonesia	4	---	---	---	8	1	---	---	6	5	1	---
U.S. vs. Korea	4	---	---	---	8	2	1	---	6	5	2	---
U.S. vs. Pakistan	4	---	---	---	10	2	---	---	6	6	4	---
U.S. vs. Taiwan	4	---	---	---	8	3	2	---	6	7	2	---
Subject countries comparisons:												
Brazil vs. Indonesia	4	---	---	---	6	1	---	---	4	3	1	---
Brazil vs. Korea	4	---	---	---	6	2	---	---	5	5	1	---
Brazil vs. Pakistan	4	---	---	---	6	1	---	---	4	6	1	---
Brazil vs. Taiwan	4	---	---	---	6	2	1	---	5	5	1	---
Indonesia vs. Korea	4	---	---	---	7	1	---	---	5	3	1	---
Indonesia vs. Pakistan	4	---	---	---	7	1	---	---	4	3	1	---
Indonesia vs. Taiwan	4	---	---	---	7	1	1	---	5	3	1	---
Korea vs. Pakistan	4	---	---	---	7	2	---	---	4	5	1	---
Korea vs. Taiwan	4	---	---	---	7	2	1	---	4	4	1	---
Pakistan vs. Taiwan	4	---	---	---	7	2	1	---	4	6	2	---
Nonsubject countries comparisons:												
U.S. vs. Canada	4	---	---	---	10	1	---	---	11	5	1	---
U.S. vs. Mexico	4	---	---	---	8	1	---	---	10	6	1	---
U.S. vs. other nonsubject	4	---	---	---	6	1	3	---	5	4	4	---
Brazil vs. Canada	4	---	---	---	6	2	---	---	5	6	1	---
Brazil vs. Mexico	4	---	---	---	6	2	---	---	5	6	1	---
Brazil vs. other nonsubject	4	---	---	---	6	1	2	---	5	4	2	---
Indonesia vs. Canada	4	---	---	---	7	1	---	---	5	3	1	---
Indonesia vs. Mexico	4	---	---	---	6	1	---	---	6	3	1	---
Indonesia vs. other nonsubject	4	---	---	---	6	1	1	---	4	4	1	---
Korea vs. Canada	4	---	---	---	7	2	---	---	4	4	1	---
Korea vs. Mexico	4	---	---	---	6	1	---	---	4	4	1	---
Korea vs. other nonsubject	4	---	---	---	6	1	2	---	5	4	2	---
Pakistan vs. Canada	4	---	---	---	8	2	---	---	4	5	2	---
Pakistan vs. Mexico	4	---	---	---	6	1	---	---	4	6	2	---
Pakistan vs. other nonsubject	4	---	---	---	6	1	2	---	4	4	2	---
Taiwan vs. Canada	4	---	---	---	7	2	---	---	4	6	2	---
Taiwan vs. Mexico	4	---	---	---	6	2	---	---	6	5	2	---
Taiwan vs. other nonsubject	4	---	---	---	6	1	2	---	4	4	2	---

Note.--A=Always, F=Frequently, S=Sometimes, N=Never.

Source: Compiled from data submitted in response to Commission questionnaires.

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As can be seen from table II-14, all responding purchasers reported that domestically produced product and subject imported product always or usually met minimum quality specifications, with the exception of Taiwan (for which all but one purchaser reported always or usually). One purchaser reported that product from Taiwan sometimes meets its minimum quality specification.

Table II-14
PET resin: Ability to meet minimum quality specifications, by source[1]

Source	Always	Usually	Sometimes	Rarely or never
United States	15	10	---	---
Brazil	5	5	---	---
Indonesia	5	4	---	---
Korea	5	3	---	---
Pakistan	7	2	---	---
Taiwan	7	4	1	---

[1] Purchasers were asked how often domestically produced or imported PET resin meets minimum quality specifications for their own or their customers' uses.

Source: Compiled from data submitted in response to Commission questionnaires.

In addition, producers, importers, and purchasers were asked to assess how often differences other than price were significant in sales of PET resin production in the United States, subject, or nonsubject countries. As seen in table II-15, all U.S. producers reported that factors other than price were never significant. A large plurality of importers reported that factors other than price were never significant for all country pairs except for the United States and Taiwan. Most importers reported that there were sometimes or never differences other than price between U.S. PET resin and PET resin from Taiwan. A plurality of purchasers reported that factors other than price were sometimes significant for all country pairs.

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Table II-15
PET resin: Significance of differences other than price between PET resin produced in the United States and in other countries, by country pair

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of purchasers reporting			
	A	F	S	N	A	F	S	N	A	F	S	N
U.S. vs. subject countries:												
U.S. vs. Brazil	---	---	---	4	---	2	1	5	4	2	7	2
U.S. vs. Indonesia	---	---	---	4	---	1	---	5	2	2	9	---
U.S. vs. Korea	---	---	---	4	---	2	1	5	1	3	7	1
U.S. vs. Pakistan	---	---	---	4	---	3	---	6	1	2	10	1
U.S. vs. Taiwan	---	---	---	4	2	2	3	3	2	2	11	---
Subject countries comparisons:												
Brazil vs. Indonesia	---	---	---	4	---	1	---	5	1	1	5	---
Brazil vs. Korea	---	---	---	4	---	1	1	5	1	2	5	1
Brazil vs. Pakistan	---	---	---	4	---	1	1	5	1	2	6	---
Brazil vs. Taiwan	---	---	---	4	---	1	3	4	1	3	6	---
Indonesia vs. Korea	---	---	---	4	---	1	---	5	1	1	5	1
Indonesia vs. Pakistan	---	---	---	4	---	1	---	5	1	1	5	---
Indonesia vs. Taiwan	---	---	---	4	---	1	1	5	1	1	5	1
Korea vs. Pakistan	---	---	---	4	---	1	1	5	1	2	5	---
Korea vs. Taiwan	---	---	---	4	---	1	2	5	1	2	5	---
Pakistan vs. Taiwan	---	---	---	4	---	1	2	5	1	2	7	1
Nonsubject countries comparisons:												
U.S. vs. Canada	---	---	---	4	---	1	3	4	4	1	8	4
U.S. vs. Mexico	---	---	---	4	---	1	2	4	3	1	9	4
U.S. vs. other nonsubject	---	---	---	4	---	2	2	5	1	4	10	---
Brazil vs. Canada	---	---	---	4	---	1	1	5	1	1	8	---
Brazil vs. Mexico	---	---	---	4	---	1	1	4	1	2	7	---
Brazil vs. other nonsubject	---	---	---	4	---	1	2	5	1	4	5	---
Indonesia vs. Canada	---	---	---	4	---	1	---	5	1	1	5	---
Indonesia vs. Mexico	---	---	---	4	---	1	---	5	1	1	5	1
Indonesia vs. other nonsubject	---	---	---	4	---	1	1	5	1	1	5	---
Korea vs. Canada	---	---	---	4	---	1	1	5	1	1	6	---
Korea vs. Mexico	---	---	---	4	---	1	1	5	1	1	6	---
Korea vs. other nonsubject	---	---	---	4	---	1	2	5	1	3	5	---
Pakistan vs. Canada	---	---	---	4	---	2	1	5	1	1	8	1
Pakistan vs. Mexico	---	---	---	4	---	1	---	5	1	1	8	---
Pakistan vs. other nonsubject	---	---	---	4	---	1	2	5	1	2	5	---
Taiwan vs. Canada	---	---	---	4	---	1	1	5	1	1	8	---
Taiwan vs. Mexico	---	---	---	4	---	1	1	5	1	2	8	1
Taiwan vs. other nonsubject	---	---	---	4	---	1	2	5	1	3	5	1

Note.--A = Always, F = Frequently, S = Sometimes, N = Never.

Source: Compiled from data submitted in response to Commission questionnaires.

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ELASTICITY ESTIMATES

This section discusses elasticity estimates; parties were encouraged to comment on these estimates as an attachment to their prehearing or posthearing brief. No comments were provided.

U.S. supply elasticity

The domestic supply elasticity[48] for PET resin measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of PET resin. The elasticity of domestic supply depends on several factors including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift to production of other products, the existence of inventories, and the availability of alternate markets for U.S.-produced PET resin. Analysis of these factors above indicates that the U.S. industry has a moderate ability to increase or decrease shipments to the U.S. market; an estimate in the range of 3 to 6 is suggested.[49]

U.S. demand elasticity

The U.S. demand elasticity for PET resin measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of PET resin. This estimate depends on factors discussed above such as the existence, availability, and commercial viability of substitute products, as well as the component share of the PET resin in the production of any downstream products. Based on the available information, the aggregate demand for PET resin is likely to be moderately to highly inelastic; a range of -0.25 to -0.75 is suggested.

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.[50] Product differentiation, in turn, depends upon such factors as quality (e.g., chemistry, appearance, etc.) and conditions of sale (e.g., availability, sales terms/ discounts/ promotions, etc.). Based on available information, the elasticity of substitution between U.S.-produced PET resin and imported PET resin is high, and likely to be in the range of 4 to 7.

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[48] A supply function is not defined in the case of a non-competitive market.

[49] This relatively high elasticity of supply is based on the assumption that M&G's West Virginia facility, purchased by FENC, will be fully functional in a relatively short time. FENC reports that it restarted the plant in early July 2018. Prior to its closure, this facility represented *** percent of U.S. capacity. During the period in which this plant was not producing, U.S. supply was much less elastic.

[50] The substitution elasticity measures the responsiveness of the relative U.S. consumption levels of the subject imports and the domestic like products to changes in their relative prices. This reflects how easily purchasers switch from the U.S. product to the subject products (or vice versa) when prices change.

PART III: U.S. PRODUCERS' PRODUCTION, SHIPMENTS, AND EMPLOYMENT

The Commission analyzes a number of factors in making injury determinations (see 19 U.S.C. §§ 1677(7)(B) and 1677(7)(C)). Information on the dumping margins was presented in Part I of this report and information on the volume and pricing of imports of the subject merchandise is presented in Part IV and Part V. Information on the other factors specified is presented in this section and/or Part VI and (except as noted) is based on the questionnaire responses of four firms that accounted for all known U.S. production of PET resin during 2017.[1]

U.S. PRODUCERS

The Commission issued a U.S. producers' questionnaire to four firms based on information contained in the petitions. All four firms provided usable data on their production operations. Staff believes that these responses represent all known U.S. production of PET resin in 2017 and, indeed, throughout January 2015-March 2018. Table III-1 lists the U.S. producers of PET resin, their production locations, positions on the petitions, and shares of total production. *** and *** are the largest U.S. producers of PET resin, accounting for *** percent and *** percent of production during 2017, respectively.

Table III-1
PET resin: U.S. producers, their positions on the petitions, production locations, and shares of reported production, 2017

Firm	Position on petitions	Production locations	Share of production (percent)
DAK	***[1]	Charlotte, NC (corporate headquarters) Fayetteville, NC Gaston, SC Moncks Corner, SC Bay St. Louis, MS	***
Indorama	Mixed/Partial[2]	Asheboro, NC (StarPet Inc.) Decatur, AL (AlphaPet Inc.) Spartanburg, SC (Auriga Polymers Inc.)	***
M&G	***[3]	Apple Grove, WV[4]	***
Nan Ya	Support	Lake City, SC	***
Total			100.0

[1] ***.
[2] Indorama supports the petitions with regards to Brazil, Korea, Pakistan, and Taiwan but does not take a position on the petition with regards to Indonesia.
[3] ***.
[4] As discussed in detail later in this part of the report, M&G's Apple Grove facility was sold to Far Eastern following M&G's bankruptcy proceedings in March 2018.

Source: Compiled from data submitted in response to Commission questionnaires.

[1] For discussion of data coverage, please refer to Part I, "Summary Data and Data Sources."

U.S. producers' ownership and related or affiliated firms

Table III-2 presents information on U.S. producers' ownership and related or affiliated firms as reported by firms in their responses to the Commission's producer questionnaire.

Table III-2
PET resin: U.S. producers' ownership, related and/or affiliated firms

* * * * * * *

DAK and, until recently, M&G are related to foreign producers in Brazil,[2] and Indorama and Nan Ya are related to foreign producers in Indonesia and Taiwan, respectively.[3] DAK became affiliated with Brazilian producer Compania Integrada Textil Pernambuco ("Citepe") through common ownership following the purchase of the Brazilian firm by DAK's parent company on May 1, 2018.[4] M&G Polímeros Brazil S.A. was affiliated with M&G through common ownership by Mossi Ghisolfi Group (Italy) ("M&G Group");[5] however, Indorama completed acquisition of M&G Polímeros Brazil S.A. on May 25, 2018.[6] Indorama is affiliated with Indonesian PET resin producers PT Indorama Ventures Indonesia ("Indorama Ventures") and PT Indorama Polypet Indonesia ("Indonesia Polypet") through common ownership by Indonesia Ventures PCL (Thailand) and is affiliated with Indonesian PET resin producer PT Indo-Rama Synthetics Tbk. ("Indorama Synthetics") through family ownership.[7] Nan Ya Plastics Corporation, America is wholly owned by Nan Ya Plastics Corporation (Taiwan).[8]

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[2] M&G no longer owns the Brazilian site as of May 25, 2018. "Thai Indorama completes acquisition of Brazil PET plant," *ICIS*, May 25, 2018, https://www.icis.com/resources/news/2018/05/25/10225107/thai-indorama-completes-acquisition-of-brazil-pet-plant/, retrieved August 14, 2018.

[3] Nan Ya Plastics Corporation, America company website, http://www.npcam.com/nno1.htm, retrieved September 24, 2018; "Organization Structure," Indorama Ventures company website, http://www.indoramaventures.com/en/our-company/organization-structure, retrieved September 24, 2018; and hearing transcript, p. 63 (Paramasivam).

[4] "Closing of Sale of PetroquímicaSuape and Citepe," Petrobras website, press release, April 30, 2018, http://www.investidorpetrobras.com.br/en/press-releases/closing-sale-petroquimicasuape-and-citepe, retrieved August 8, 2018.

[5] M&G Company website, http://www.mg-chemicals.com/en/company/company-profile, retrieved September 24, 2018.

[6] "Thai Indorama completes acquisition of Brazil PET plant," *ICIS*, May 25, 2018, https://www.icis.com/resources/news/2018/05/25/10225107/thai-indorama-completes-acquisition-of-brazil-pet-plant/, retrieved August 14, 2018.

[7] "Organization Structure," Indorama Ventures company website, http://www.indoramaventures.com/en/our-company/organization-structure, retrieved September 24, 2018; and hearing transcript, p. 63 (Paramasivam).

[8] Nan Ya Plastics Corporation, America company website, http://www.npcam.com/nno1.htm, retrieved September 24, 2018.

As discussed in greater detail later in this section of the report, U.S. producers also source PET resin either directly or indirectly from producers located in countries in which the domestic producers have related firms. *** directly imported and domestically purchased PET resin imported from ***. In addition, *** directly imported PET resin from *** and domestically purchased PET resin imported from ***. Indorama is affiliated with foreign producers of PET resin in Indonesia, as well as a dozen nonsubject countries.[9] M&G ***, countries in which related M&G PET resin producers are located.[10] *** directly imported PET resin from *** and is affiliated with foreign producers of PET resin in ***, as well as in ***. Nan Ya reported that it does not purchase or import PET resin but that it is affiliated with foreign producers of PET resin in Taiwan and Vietnam.[11]

Major industry events

Table III-3 presents a timeline of the major events affecting the PET resin industry since January 1, 2015.

Table III-3
PET resin: Major industry events since December 2014

Date	Event
December 2014	M&G begins construction of the Corpus Christi, Texas PET resin plant. Expected project completion by end of 2016.
March 15, 2015	Petitioners file antidumping and countervailing duty petitions on U.S. imports of PET resin from Canada, China, India, and Oman.
May 6, 2016	Commerce issues antidumping and countervailing duty orders on PET resin from Canada, China, India, and Oman.
August 1, 2016	Parent company of U.S. producer DAK acquires Selenis Canada, Inc., which is renamed Compagnie Selenis Canada.

Table continued on next page.

[9] "Organization Structure," Indorama Ventures company website, http://www.indoramaventures.com/en/our-company/organization-structure, retrieved September 24, 2018; and hearing transcript, p. 63 (Paramasivam).

[10] As previously noted, M&G Polímeros Brazil, S.A. is now owned by Indorama. M&G shut down its Altamira, Mexico, PET facility on September 5, 2017, due to the inability to purchase raw materials. The plant was restarted in November 2017. In January 2018, Alpek, S.A.B. de C.V. ("Alpek") (owner of U.S. PET resin producer DAK) signed an agreement to provide secured financing to M&G Polímeros México, S.A. de C.V. ("M&G Mexico") to normalize the PET resin operations in Mexico until the completion of its restructuring process. Boswell, Clay, "M&G Chemicals files for Chapter 11 bankruptcy, plans asset sale," *Chemical Week*, November 2, 2017, https://www.borderless.net/mg-chemicals-files-for-chapter-11-bankruptcy-plans-asset-sale/, retrieved September 24, 2018; "Mexico Alpek prioritises capacity rights regarding M&G Corpus Christi plant," *ICIS News*, February 13, 2018, https://www.icis.com/resources/news/2018/02/13/10193112/mexico-alpek-prioritises-capacity-rights-regarding-m-g-corpus-christi-plant/, retrieved September 24, 2018; and Alpek Press Release, January 11, 2018, http://www.alpek.com/pdf/2018/Alpek-MG-Financing.pdf, retrieved September 24, 2018.

[11] Hearing transcript, pp. 60-62 (Freeman).

Table III-3—Continued
PET resin: Major industry events since December 2014

Date	Event
October 8, 2016	Hurricane Matthew hits East Coast of U.S. mainland.
October 2016	U.S. producer DAK declares force majeure at its Fayetteville facility due to the hurricane's impact on rail transportation of raw materials to that facility. Production down for less than one week. DAK supplies PET resin from inventory and other facilities.
August 25, 2017	Hurricane Harvey hits Texas Gulf coast.
September 5, 2017	M&G shuts down its Altamira, Mexico, PET facility due to the inability to purchase raw materials.
September 12, 2017	Alpek ceases PET feedstock supply to M&G PET resin plants in Mexico and Brazil.
September 21, 2017	M&G gives WARN Act notice that it will be ceasing production activities at its West Virginia facility. It also announces that financial difficulties require it to reduce its plant construction activity at Corpus Christi, Construction contractor Fluor releases 274 workers from M&G Corpus Christi project.
September 26, 2017	Petitioners file antidumping duty petitions on U.S. imports of PET resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan.
Early October 2017	M&G announces plans to release 100 workers from M&G Corpus Christi project.
October 24 and 30, 2017	M&G officially files for bankruptcy; its U.S. PET resin facility in West Virginia shuts down and construction on Corpus Christi facility ceases; M&G seeks buyer for its unfinished Corpus Christi plant in bankruptcy documents.
November 2017	M&G Altamira, Mexico, PET resin facility restarts.
January 2018	Alpek, S.A.B. de C.V. (“Alpek”) (owner of U.S. PET resin producer DAK) signs agreement to provide secured financing to M&G Polímeros México, S.A. de C.V. (“M&G Mexico”) to normalize the PET resin operations in Mexico until the completion of its restructuring process.
March 2018	Sale of M&G’s West Virginia facility to Taiwan PET resin producer Far Eastern New Century Corp. (“FENC” or “Far Eastern”) finalized through bankruptcy proceedings. FENC renames the West Virginia facility APG Polytech LLC.
March 28, 2018	U.S. bankruptcy court approves sale of M&G’s Corpus Christi plant to newly formed joint venture comprised of Alpek (parent of U.S. producer DAK), Indorama Ventures (parent of U.S. producer Indorama), and Far Eastern (Taiwan PET resin producer). Indorama states that PET production at Corpus Christi is not likely to before 2020 and feedstock PTA lines are expect to follow in 2021.
April 30, 2018	Alpek (parent of U.S. producer DAK) acquires Citepe’s Brazilian PET resin facility.
May 25, 2018	Indorama Ventures (Thai parent of U.S. and Indonesian PET resin producers) acquires M&G Polímeros Brasil PET resin facility, Brazil PET resin producer is renamed Indorama Ventures Polímeros S/A.
July 2018	Far Eastern restarts former M&G Apple Grove, West Virginia facility.
July 15, 2018	Fire at Alpek’s PTA plant in Mexico disrupts supply of PTA to PET resin producer DAK.
***	Far Eastern’s first sale of PET resin from former M&G Apple Grove, West Virginia facility.

Source: Various publications.

U.S. producers' changes in operations

Table III-4 presents the changes in U.S. operations since January 1, 2015 as reported by U.S. producers in their questionnaire responses.

Table III-4
PET resin: U.S. producers' reported changes in operations, since January 1, 2015

* * * * * * *

Additional information concerning changes in U.S. operations are identified as follows:

DAK

On August 1, 2016, the parent company of U.S. producer DAK announced that it acquired a controlling interest in Selenis Canada Inc. from the IMG Group (Portugal), which resulted in a legal name change for Selenis Canada Inc. to Compagnie Selenis Canada.[12] Compagnie Selenis Canada operates a PET production facility in Montreal, Quebec with an annual capacity to produce 288 million pounds of PET resin.[13] In addition, on April 30, 2018, the parent company of U.S. producer DAK purchased Compania Integrada Textil de Pernambuco ("Citepe"), a Brazilian producer of PET resin subject to these investigations.[14]

In July 2018, a fire at Alpek's Petrotemex plant in Mexico is expected to disrupt the downstream PET markets in the Americas and reports indicate that the disruption may affect the supply of raw material PTA to U.S. PET resin producer DAK.[15]

Indorama

Indorama reported that ***. It indicated that its overall annual plant capacity at its Spartanburg facility was ***.[16] Indorama also reported that it has ***.

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[12] DAK Americas press release, August 1, 2016, https://davispet.ca/files/258197/dak-selenis-canada-release-eng-7-25-16-final.pdf, retrieved October 24, 2017; and Selenis company webpage, http://www.seleniscanada.com/, retrieved August 8, 2018.

[13] Selenis company webpage, http://www.seleniscanada.com/, retrieved August 8, 2018.

[14] "Closing of Sale of PetroquímicaSuape and Citepe," Petrobras press release, April 30, 2018, http://www.investidorpetrobras.com.br/en/press-releases/closing-sale-petroquimicasuape-and-citepe, retrieved August 8, 2018.

[15] "Mexico PTA plant fire further disrupts tight Americas PET market," *ICIS*, July 17, 2018, https://www.icis.com/resources/news/2018/07/17/10242344/mexico-pta-plant-fire-further-disrupts-tight-americas-pet-market/, retrieved on August 16, 2018; "Alpek informs about an incident at its PTA plant in Altamira, Mexico," *Alpek Press Release*, www.alpek.com/pdf/2018/Alpek-Incidente-PTA-Altamira-ENG.pdf, retrieved on August 16, 2018.

[16] Indorama's overall annual production capacity at all of its U.S. production facilities combined is *** pounds.

M&G

In December 2014, M&G began construction of a PET resin plant in Corpus Christi, Texas. The PET resin plant was expected to have a nominal annual production capacity of 1.1 million tons and the plant for integrated PTA feedstock was expected to have a nominal annual production capacity of 1.3 million tons.[17] The project was expected to be completed by the end of 2016, but went heavily over-budget and faced delays due to financial issues. In fact, liens with more than $100 million in claims were filed against M&G concerning the project.[18] M&G's creditors included PET and PTA feedstock supplier Indorama, which was owed almost $57 million, and Alpek SAB de CV (owner of U.S. PET resin producer DAK), which was owed $49 million.[19] M&G's financial issues spread beyond the Corpus Christi facility, as Alpek announced in September 2017 that it ceased PET feedstock supply to two M&G plants in Mexico and Brazil as a result of the debt, and M&G stopped PET resin production at its 1.2 billion-pound capacity plant in Mexico.[20]

In October 2017, M&G filed for Chapter 11 bankruptcy protection, listing liabilities between $100 million and $500 million, and its parent company, M&G Group, filed an application of "concordato preventivo," which is a type of bankruptcy proceeding under Italian law.[21] Due to the insolvency of the M&G Group, construction work on the Corpus Christi site, which was 85 percent complete, was subsequently placed on hold.[22] In addition to the $1.1

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[17] *M&G's webpage,* http://www.mgcorpuschristi.com/en/corpus-christi/the-projects, retrieved October 23, 2017.

[18] Petitioner's postconference brief, p. 4; *Corpus Christ 'Jumbo Project' $100 million headache for U.S., Texas Companies*, http://www.mysanantonio.com/business/local/article/Corpus-Christi-Jumbo-Project-100-million-11072149.php, retrieved October 12, 2017; and *Alpek Cutting off M&G Over Unpaid Bills*, https://cen.acs.org/articles/95/web/2017/09/Alpek-cutting-off-MG-over.html, retrieved October 13, 2017; and Acosta, Tim, "Port of Corpus Christi keeping an eye on pending sale of M&G's plant," *Corpus Christi Caller-Times*, June 6, 2018, https://www.caller.com/story/news/local/2018/06/06/port-corpus-christi-keeping-eye-pending-sale-m-gs-plant-bankruptcy-plastics-manufacturing/674756002/, retrieved August 8, 2018.

[19] *M&G Polymers USA Files for Chapter 11 Protection,* http://www.plasticsnews.com/article/20171025/NEWS/171029941/mg-polymers-usa-files-for-chapter-11-protection, retrieved October 27, 2017.

[20] Ibid.

[21] *M&G Polymers USA Files for Chapter 11 Protection,* http://www.plasticsnews.com/article/20171025/NEWS/171029941/mg-polymers-usa-files-for-chapter-11-protection, retrieved October 27, 2017.

[22] "Corpus Christi Polymers: Acquisition of the PTA/PET complex of M&G in Texas," *Plasticker-News*, April 10, 2018, https://plasticker.de/Plastics_News_32445_Corpus_Christi_Polymers_Acquisition_of_the_PTA_PET_complex_of_M+G_in_Texas, retrieved on August 8, 2018.

billion M&G had already invested into the Corpus Christi project, a little more than $500 million was needed to complete the facility.[23]

On March 28, 2018, the sale of M&G's Corpus Christi plant to newly formed joint venture Corpus Christi Polymers for $1.125 billion was approved by the U.S. bankruptcy court.[24] In the bankruptcy judge approves the proposed reorganization of M&G Corpus Christi and its assets during a confirmation hearing, the successful bid for the unfinished plant by Corpus Christi Polymers will be finalized.[25] The joint venture, which was created specifically for the purchase of the Corpus Christi plant, is owned by Alpek (owner of U.S. PET resin producer DAK), Indorama Ventures (parent of U.S. PET resin producer Indorama), and Far Eastern Investment Holding (Taiwan producer of PET resin). The joint venture plans to complete the construction of the Corpus Christi complex, with each of the three partners having independent access to one-third of the capacities at the facility. Each of the partners plans to procure raw materials and sell and distribute their PTA and PET resin independently from the facility; however, a timeline for completion of the facility has not been provided by Corpus Christi Polymers.[26]

Additionally, as part of the bankruptcy process, Indorama Ventures purchased M&G's PET resin facility in Brazil (M&G Polímeros Brasil) and Far Eastern bought the shuttered M&G plastics plant in West Virginia.[27] In particular, M&G's Apple Grove, West Virginia PET resin facility was shut down in October 2017 and the sale of the facility to Taiwan PET resin producer Far Eastern was finalized through bankruptcy proceedings in March 2018. The name of the Apple Grove facility was initially changed to FE Polytech, LLC and was later changed to APG Polytech, LLC by its new owner. M&G reported that the Apple Grove facility had not restarted

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[23] Conference transcript, p. 35 (Fournier); and Acosta, Tim, "Judge OKs bankruptcy sale of M&G's Corpus Christi plant," *Corpus Christi Caller-Times*, April 2, 2018, https://www.caller.com/story/news/local/2018/04/02/judge-oks-bankruptcy-sale-m-gs-corpus-christi-plant-port-corpus-christi/478664002/, retrieved on August 8, 2018.

[24] Acosta, Tim, "Judge OKs bankruptcy sale of M&G's Corpus Christi plant," *Corpus Christi Caller-Times*, April 2, 2018, https://www.caller.com/story/news/local/2018/04/02/judge-oks-bankruptcy-sale-m-gs-corpus-christi-plant-port-corpus-christi/478664002/, retrieved on August 8, 2018.

[25] Acosta, Tim, "Port of Corpus Christi keeping an eye on pending sale of M&G's plant," *Corpus Christi Caller-Times*, June 6, 2018, https://www.caller.com/story/news/local/2018/06/06/port-corpus-christi-keeping-eye-pending-sale-m-gs-plant-bankruptcy-plastics-manufacturing/674756002/, retrieved August 8, 2018.

[26] Acosta, Tim, "Judge OKs bankruptcy sale of M&G's Corpus Christi plant," *Corpus Christi Caller-Times*, April 2, 2018, https://www.caller.com/story/news/local/2018/04/02/judge-oks-bankruptcy-sale-m-gs-corpus-christi-plant-port-corpus-christi/478664002/, retrieved on August 8, 2018.

[27] "Corpus Christi Polymers: Acquisition of the PTA/PET complex of M&G in Texas," *Plasticker-News*, April 10, 2018, https://plasticker.de/Plastics_News_32445_Corpus_Christi_Polymers_Acquisition_of_the_PTA_PET_complex_of_M+G_in_Texas, retrieved on August 8, 2018; and Acosta, Tim, "Judge OKs bankruptcy sale of M&G's Corpus Christi plant," *Corpus Christi Caller-Times*, April 2, 2018, https://www.caller.com/story/news/local/2018/04/02/judge-oks-bankruptcy-sale-m-gs-corpus-christi-plant-port-corpus-christi/478664002/, retrieved on August 8, 2018.

as of the end of June 2018.[28] The Apple Grove facility's new owner, Far Eastern, restarted the Apple Grove facility in July 2018.[29] It noted that the facility has a total annual capacity of *** and is currently operating at *** percent capacity utilization. Far Eastern expects that the facility will ***. Successful production of *** was first produced at the Apple Grove facility under the new ownership on or about *** and Far Eastern's first sale from the newly acquired Apple Grove plant ***.[30]

Nan Ya

Since 2015, Nan Ya reported that *** and that "***."

U.S. PRODUCTION, CAPACITY, AND CAPACITY UTILIZATION

PET resin

Table III-5 and figure III-1 present U.S. producers' production, capacity, and capacity utilization. These data indicate that the U.S. producers' capacity to produce PET resin was stable at 6.9 billion pounds from 2015 to 2016, fell to 6.8 billion pounds in 2017 (with the shutdown of M&G's West Virginia facility in October 2017), and was 9.7 percent lower in the first quarter ("interim") 2018 as compared with interim 2017.[31] Production increased by 4.7 percent, from 5.6 billion pounds in 2015 to 5.9 billion pounds in 2016, but fell by 4.7 percent to 5.6 billion pounds in 2017. Production was 16.1 percent higher (1.4 billion pounds) during interim 2018 than in interim 2017 (1.2 billion pounds). U.S. producers' capacity utilization increased from 81.0 percent in 2015 to 84.8 percent in 2016, fell to 82.1 percent in 2017,[32] and was 89.0 percent during interim 2018, compared with 69.3 percent in interim 2017.

[28] Certificate of Amendment of Certificate of Formation of FE Polytech, LLC, Information for the Transfer of Control, March 29, 2018, https://www.nrc.gov/docs/ML1810/ML18100A360.pdf, retrieved August 13, 2018.

[29] Hearing transcript, p. 30 (Freeman).

[30] Email from ***.

[31] ***.

[32] ***.

Table III-5
PET resin: U.S. producers' capacity, production, and capacity utilization, 2015-17, January to March 2017, and January to March 2018

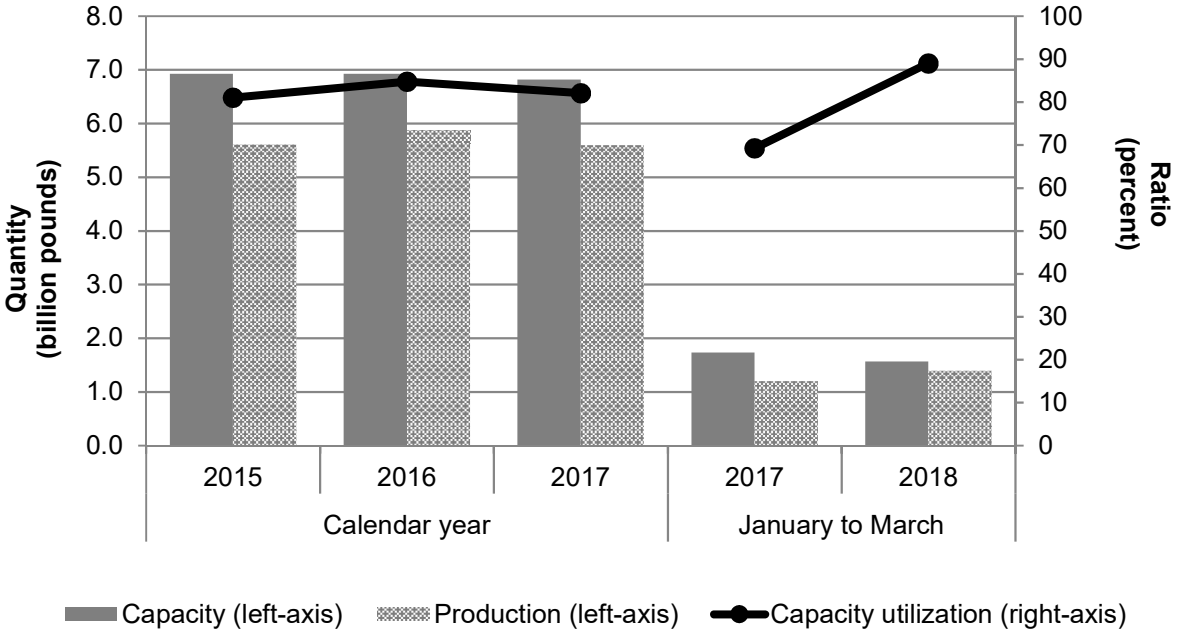
Item	Calendar year			January to March	
	2015	2016	2017	2017	2018
	Capacity (1,000 pounds)				
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G[1]	***	***	***	***	***
Nan Ya	***	***	***	***	***
Total capacity[2]	6,923,512	6,923,512	6,817,262	1,730,878	1,563,574
	Production (1,000 pounds)				
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G[1]	***	***	***	***	***
Nan Ya	***	***	***	***	***
Total production	5,609,164	5,871,344	5,596,329	1,198,814	1,392,224
	Capacity utilization (percent)				
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G[1]	***	***	***	***	***
Nan Ya	***	***	***	***	***
Average capacity utilization	81.0	84.8	82.1	69.3	89.0

[1] In October 2017, M&G filed for Chapter 11 bankruptcy protection. As part of the bankruptcy process, M&G's Apple Grove, West Virginia PET resin facility was shut down in October 2017 and the sale of the facility to Taiwan PET resin producer Far Eastern was finalized through bankruptcy proceedings in March 2018. The Apple Grove plant was restarted by its new owner in July 2018, who noted that successful production of *** was first produced on or about ***. Email from *** and hearing transcript, p. 30 (Freeman). ***.

[2] All four firms reported that capacity was calculated based on operating 168 hours per week. *** reported that its capacity was calculated based on operating *** weeks per year and *** reported that their capacity was calculated based on operating *** weeks per year.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure III-1
PET resin: U.S. producers' capacity, production, and capacity utilization, 2015-17, January to March 2017, and January to March 2018



Source: Compiled from data submitted in response to Commission questionnaires.

Alternative products

As shown in table III-6, responding U.S. producers produced other products on the same equipment and machinery used to produce PET resin.[33] U.S. producers' overall production capacity remained constant at 7.2 billion pounds from 2015 to 2016, declined to 7.0 billion pounds in 2017 (as a result of the shutdown of M&G's West Virginia PET resin plant in October 2017), and was lower in interim 2018 than in interim 2017. In 2017, subject PET resin accounted for *** percent of the combined production for the four U.S. producers, with relatively minor amounts of out-of-scope material produced by two U.S. producers, *** and ***. *** reported the production of out-of-scope *** and *** reported the production of out-of-scope *** that used the same equipment and machinery used in the production of subject PET resin. *** noted that ***. *** stated that ***.

[33] In addition, DAK indicated that ***. Imports of this *** PET resin product by DAK ***.

Table III-6
PET resin: U.S. producers' overall capacity and production on the same equipment as subject product, 2015-17, January to March 2017, and January to March 2018

Item	Calendar year			January to March	
	2015	2016	2017	2017	2018
	Quantity (1,000 pounds)				
Overall capacity	7,146,242	7,146,242	7,021,242	1,786,560	1,578,455
Production:					
PET resin	5,609,164	5,871,344	5,596,329	1,198,814	1,392,224
Out-of-scope products[1]	***	***	***	***	***
Total production on same machinery	***	***	***	***	***
	Ratios and shares (percent)				
Overall capacity utilization	***	***	***	***	***
Share of production:					
PET resin	***	***	***	***	***
Out-of-scope products[1]	***	***	***	***	***
Total production on same machinery	100.0	100.0	100.0	100.0	100.0

[1] Out-of-scope products identified include ***.

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. PRODUCERS' U.S. SHIPMENTS AND EXPORTS

Table III-7 presents U.S. producers' U.S. shipments, export shipments, and total shipments. There were no internal consumption or transfers to related firms of U.S. product, and exports were modest. U.S. commercial shipments accounted for more than *** percent of total shipments in each full year and interim period. U.S. shipments increased from 5.4 billion pounds in 2015 to 5.7 billion pounds in 2017, a 5.6 percent increase. All U.S. producers experienced an overall increase in the quantity of U.S. shipments during 2015-17, with the exception of ***, which experienced declines in U.S. shipments during all periods. U.S. shipments were 5.4 percent higher in interim 2018 than in interim 2017.

While the quantity of U.S. producers' U.S. shipments increased, the value of those shipments decreased by 10.3 percent between 2015 and 2016, from $3.1 billion to $2.8 billion, but increased by 8.4 percent in 2017. The value of U.S. shipments was 21.0 percent higher during interim 2018 compared with the same period in 2017. The average unit value of U.S. producers' U.S. shipments, consequently, fell from $0.59 per pound in 2015 to $0.52 per pound in 2016, though it increased to $0.54 per pound in 2017 and was $0.62 per pound in interim 2018.

Export shipments accounted for *** percent or less of total U.S. producers' shipments during each full year and interim period. Export shipments accounted for only *** percent of total U.S. producers' U.S. shipments during the first quarter of 2018. Export destinations for PET resin produced by ***. U.S. producers' export shipments of PET resin fluctuated year to year, increasing from *** pounds in 2015 to *** pounds in 2016, and then decreasing to *** pounds in 2017 for an overall decline of *** percent. Export shipments were *** percent higher in January-March 2018 when compared to January-March 2017. The average unit value of export shipments fell from $*** per pound in 2015 to $*** per pound in 2016, but increased to $***

per pound in 2017, equivalent to an overall *** percent increase during 2015-17. It was *** percent higher at $*** per pound in January-March 2018 than in January-March 2017 ($*** per pound). The average unit value of export shipments was lower than the average unit value of U.S. shipments in during 2015-16, but higher in subsequent periods.

Table III-7
PET resin: U.S. producers' U.S. shipments, exports shipments, and total shipments, 2015-17, January to March 2017, and January to March 2018

Item	Calendar year			January to March	
	2015	2016	2017	2017	2018
	Quantity (1,000 pounds)				
U.S. shipments	5,369,453	5,462,433	5,668,234	1,318,225	1,389,555
Export shipments	***	***	***	***	***
Total shipments	***	***	***	***	***
	Value (1,000 dollars)				
U.S. shipments	3,141,521	2,816,592	3,054,277	710,313	859,678
Export shipments	***	***	***	***	***
Total shipments	***	***	***	***	***
	Unit value (dollars per pound)				
U.S. shipments	0.59	0.52	0.54	0.54	0.62
Export shipments	***	***	***	***	***
Total shipments	***	***	***	***	***
	Share of quantity (percent)				
U.S. shipments	***	***	***	***	***
Export shipments	***	***	***	***	***
Total shipments	100.0	100.0	100.0	100.0	100.0
	Share of value (percent)				
U.S. shipments	***	***	***	***	***
Export shipments	***	***	***	***	***
Total shipments	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. PRODUCERS' INVENTORIES

Table III-8 presents U.S. producers' end-of-period inventories and the ratio of those inventories to U.S. producers' production, U.S. shipments, and total shipments. During 2015-16, U.S. producers' end-of-period inventories increased by *** percent, from *** pounds in 2015 to *** pounds in 2016, but declined by *** percent to *** pounds in 2017. End-of-period inventories were *** percent higher (at *** pounds) in interim 2018 than in interim 2017. *** and *** together held *** percent of total end-of-period inventories in 2017 and *** percent of total inventories at the end of interim 2018. The ratios of U.S. producers' inventories to U.S. production and to U.S. shipments were higher by *** percentage points and *** percentage points, respectively, in 2016 than in 2015. These ratios declined in 2017 to levels slightly below those experienced in 2015 and remained at similar levels of *** percent during the first quarter of 2018.

Table III-8
PET resin: U.S. producers' inventories, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

U.S. PRODUCERS' IMPORTS AND PURCHASES

U.S. producers' imports and purchases of PET resin are presented in table III-9. Two U.S. producers (*** and ***) imported PET resin from subject sources and three U.S. producers (***, ***, and ***) imported PET resin from nonsubject sources. *** was the only producer that reported purchases of PET resin in the United States.

Table III-9
PET resin: U.S. producers' imports and purchases, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

U.S. producer DAK ***. It noted that it ***. The ratio of ***. *** during the first quarter of 2018 were equivalent to *** percent of the firm's U.S. production during that quarter. Brazilian producer Citepe, which became affiliated with DAK following the purchase of the Brazilian firm by DAK's parent company,[34] indicated in its foreign producer questionnaire response that it "***."

Indorama directly imported PET resin from *** during ***. The ratio of those imports to Indorama's U.S. production was ***. Indorama also purchased subject PET resin domestically from U.S. importers of the product from ***. The ratio of those domestic purchases to *** U.S. production was ***. Indorama also reported direct imports from *** and ***. Indorama noted that ***. It also imports PET resin from *** because ***.[35]

M&G imported PET resin from Brazil and Mexico in ***.[36] The ratio of M&G's imports from Brazil to its U.S. production ranged from a low of *** percent in *** to a high of *** percent in ***. The ratio of M&G's imports from Mexico to U.S. production ranged from a low of *** percent in *** to a high of *** percent in *** for the annual periods. In the preliminary phase of the investigations, M&G stated that the decision to import PET resin from Mexico or sell it from its U.S. facilities was determined by capacity availability.[37] It noted that since the

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[34] "Closing of Sale of PetroquímicaSuape and Citepe," Petrobras website, press release, April 30, 2018, http://www.investidorpetrobras.com.br/en/press-releases/closing-sale-petroquimicasuape-and-citepe, retrieved August 8, 2018.

[35] Petitioners' postconference brief, answers to staff questions, p. 11.

[36] As previously noted, M&G's U.S. PET resin facility was shutdown in October 2017 and had not restarted as of the end of June 2018. The M&G facility was sold to Taiwan PET resin producer Far Eastern through bankruptcy proceedings in March 2018 and the facility was restarted by its new owner in July 2018.

[37] Conference transcript, pp. 34 and 68 (Fournier).

annual production capacity at its West Virginia facility was relatively small by present standards, it relied on imports of PET resin from Mexico in order to participate as a prominent supplier of the U.S. market. M&G also noted that the completion of the Corpus Christi facility would have enabled it to establish a larger footprint in the U.S. market as a producer and to reduce its imports from Mexico.[38] In these final phase investigations, M&G reported that it ***.

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

Table III-10 shows U.S. producers' employment-related data from 2015 to March 2018. During 2015-17, the number of production and related workers ("PRWs") increased overall by 4.7 percent, from 889 to 931, as three of the four U.S. producers experienced increases in employment. However, the number of PRWs reported by domestic producers was 12.9 percent lower in January-March 2018 than in January-March 2017, reflecting the October 2017 shutdown of the M&G facility, which involved 130 workers at the West Virginia location.[39] Similarly, the aggregate number of hours worked by PET resin PRWs at the domestic facilities increased by 10.1 percent from 2015 to 2017; however, it was 12.0 percent lower during the first quarter of 2018 as compared with the first quarter of 2017. Overall, U.S. producers' aggregate wages, hourly wages, productivity, and unit labor costs declined during 2015-17. Although productivity was higher in interim 2018 than interim 2017, wages and unit labor costs were lower in interim 2018 when compared with interim 2017.

Table III-10
PET resin: U.S. producers' employment related data, 2015-17, January to March 2017, and January to March 2018

Item	Calendar year			January to March	
	2015	2016	2017	2017	2018
Production and related workers (PRWs) (number)	889	886	931	933	813
Total hours worked (1,000 hours)	1,865	1,959	2,054	518	456
Hours worked per PRW (hours)	2,098	2,211	2,206	555	561
Wages paid ($1,000)	70,785	68,629	66,190	17,292	14,590
Hourly wages (dollars per hour)	$37.95	$35.03	$32.22	$33.38	$32.00
Productivity (pounds per hour)	3,007.6	2,997.1	2,724.6	2,314.3	3,053.1
Unit labor costs (dollars per 1,000 pounds)	$12.62	$11.69	$11.83	$14.42	$10.48

Source: Compiled from data submitted in response to Commission questionnaires.

[38] Ibid.

[39] Robinson, Kathryn, "Update: Former M&G Polymers plant purchased," *WSAZ News*, http://www.wsaz.com/content/news/MG-Polymers-plant-to-close-more-than-100-layoffs-expected-448049843.html, retrieved August 14, 2018.

PART IV: U.S. IMPORTS, APPARENT U.S. CONSUMPTION, AND MARKET SHARES

U.S. IMPORTERS

The Commission issued importer questionnaires to 40 firms believed to be possible importers of PET resin, as well as to all U.S. producers of PET resin.[1] U.S. import data presented in this report are based on the data of 21 firms[2] that represent an estimated *** percent of total subject imports: *** percent of U.S. imports from Brazil, *** percent of U.S. imports from Indonesia, *** percent of imports from Korea, *** percent of U.S. imports from Pakistan, and *** percent of imports from Taiwan in 2017 under HTS statistical reporting numbers 3907.61.0000 and 3907.69.0000, as adjusted to remove out-of-scope material.[3] Five firms[4] indicated that they had not imported PET resin into the United States since January 1, 2015. Table IV-1 lists all responding U.S. importers of PET resin from Brazil, Indonesia, Korea, Pakistan, Taiwan, and other sources, their locations, and their shares of U.S. imports, in 2017.

Table IV-1
PET resin: U.S. importers, their headquarters, and share of total imports by source, 2017

* * * * * * *

[1] The Commission issued questionnaires to those firms identified in the petitions, along with firms that, based on a review of data provided by U.S. Customs and Border Protection ("Customs"), may have accounted for more than one percent of total imports under HTS statistical reporting numbers 3907.60.0030, 3907.60.0070, 3907.61.0000, and 3907.69.0000. Merchandise subject to investigation was imported under HTS statistical numbers 3907.60.0030 and 3907.60.0070 during 2015-16. Effective January 1, 2017, the HTS statistical number changed to 3907.61.0000 and 3907.69.0000 at the request of the European Union to the World Customs Organization.

[2] Nineteen importers provided responses to the Commission's questionnaire in the final phase of these investigations. The Pacific Rim Traders LLC ("Pacific Rim"), a key U.S. importer from Korea, and Ampet, Inc. ("Ampet"), an importer of PET resin from Indonesia, did not provide questionnaire responses in the final phase of these investigations, although Pacific Rim provided a questionnaire response in the preliminary phase. To address gaps in the data created by the absence of certain questionnaire responses in the final phase of these investigations, data submitted in response to U.S. importers' questionnaires are supplemented with the previously submitted preliminary phase questionnaire response and ***.

[3] These U.S. import data represent an estimated *** percent of total subject imports, *** percent of U.S. imports from Brazil, *** percent of U.S. imports from Indonesia, *** percent of imports from Korea, *** percent of U.S. imports from Pakistan, and *** percent of imports from Taiwan during the period of investigation (January 2015-March 2018).

[4] These five firms are: ***. The following eight firms that certified that they did not import in-scope PET resin during the preliminary phase of these investigations were not issued an importer questionnaire in the final phase of these investigations: ***.

U.S. IMPORTS

Table IV-2 and figure IV-1 present data for U.S. imports of PET resin from Brazil, Indonesia, Korea, Pakistan, Taiwan, and all other sources. Because HTS statistical reporting numbers 3907.60.0030, 3907.60.0070, 3907.61.0000, and 3907.69.0000 include items that are not within the scope of merchandise subject to these investigations (e.g., PETG,[5] PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram, and PET resin that contains more than 50 percent recycled product by weight), U.S. import data presented in this report are based on questionnaire responses, unless otherwise indicated.

Brazil was the largest source of subject imports, accounting for *** percent of total U.S. imports during 2017, followed by Taiwan (*** percent), Pakistan (*** percent), Korea (*** percent), and Indonesia (*** percent). From 2015 to 2017, U.S. imports from subject countries, by volume, increased by 183.5 percent, from 301.9 million pounds to 855.8 million pounds. U.S. imports from Brazil experienced the largest increase among subject countries, in absolute terms, ending *** pounds higher in 2017 than in 2015. All the increase of U.S. imports from Brazil can be attributed to the three largest U.S. importers—***, ***, and ***—with the majority of the increase occurring from 2015 to 2016.[6] U.S. imports from the subject countries were 69.6 percent lower in January-March 2018 than in January-March 2017, primarily attributable to the absence of U.S. imports during the first quarter 2018 from Brazil and Korea and a relatively minor amount of U.S. imports from Indonesia. The average unit value of U.S. imports of PET resin from subject countries fell from $0.49 per pound in 2015 to $0.46 per pound in 2016, but increased to $0.51 per pound in 2017. The average unit value was $0.52 per pound in the first quarter of 2017 and $0.55 per pound in the first quarter of 2018.

The leading nonsubject sources of U.S. imports of PET resin were Mexico and Canada. Mexico accounted for between *** percent and *** percent of total U.S. imports, by quantity, during 2015-17, while Canada accounted for between *** percent and *** percent. U.S. imports from Mexico grew from *** pounds in 2015 to *** pounds in 2016, but declined to *** pounds in 2017, equivalent to an overall *** percent increase from 2015 to 2017. This growth can be attributed to *** and ***, which together accounted for *** U.S. imports from Mexico in 2017. U.S. imports from Mexico were *** percent lower in January-June 2018 than in January-June 2017. U.S. imports from Canada fell by *** percent, from *** pounds in 2015 to *** pounds in 2017. This decrease was mostly attributable to ***, the largest U.S. importer of PET resin from Canada.[7] U.S. imports from Canada were *** percent lower in interim 2018 than in interim 2017.

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[5] Two firms responding to the Commission's questionnaire in these final investigations reported imports of PETG. *** reported imports of PETG from Korea (***). *** reported imports of PETG from Portugal (***).

[6] Antidumping and countervailing duty orders on PET resin from Canada, China, India, and Oman became effective May 6, 2016. The petitioners argue that as the imports from these four countries under orders began to recede, U.S. imports from the five countries subject to these current proceedings "surged" into the U.S. market. Hearing transcript, pp. 14-15 (Cannon).

[7] As previously noted, a controlling interest in Canadian PET resin producer Selenis was acquired by the parent company of U.S. producer DAK on August 1, 2016.

Table IV-2
PET resin: U.S. imports, by source, 2015-17, January to March 2017, and January to March 2018

Item	Calendar year			January to March	
	2015	2016	2017	2017	2018
	Quantity (1,000 pounds)				
U.S. imports from.--					
Brazil	***	***	***	***	***
Indonesia	***	***	***	***	***
Korea	***	***	***	***	***
Pakistan	***	***	***	***	***
Taiwan	***	***	***	***	***
Subject sources	301,899	733,832	855,806	232,855	70,777
Canada	***	***	***	***	***
Mexico	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	700,108	699,230	502,235	186,207	258,642
All import sources	1,002,007	1,433,062	1,358,041	419,062	329,419
	Value (1,000 dollars)				
U.S. imports from.--					
Brazil	***	***	***	***	***
Indonesia	***	***	***	***	***
Korea	***	***	***	***	***
Pakistan	***	***	***	***	***
Taiwan	***	***	***	***	***
Subject sources	149,065	337,342	440,714	120,350	38,691
Canada	***	***	***	***	***
Mexico	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubejct sources	384,859	337,587	268,261	148,116	155,068
All import sources	533,924	674,929	708,975	268,466	193,759
	Unit value (dollars per pound)				
U.S. imports from.--					
Brazil	***	***	***	***	***
Indonesia	***	***	***	***	***
Korea	***	***	***	***	***
Pakistan	***	***	***	***	***
Taiwan	***	***	***	***	***
Subject sources	0.49	0.46	0.51	0.52	0.55
Canada	***	***	***	***	***
Mexico	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	0.55	0.48	0.53	0.80	0.60
All import sources	0.53	0.47	0.52	0.64	0.59

Table continued on next page.

Table IV-2—Continued
PET resin: U.S. imports, by source, 2015-17, January to March 2017, and January to March 2018

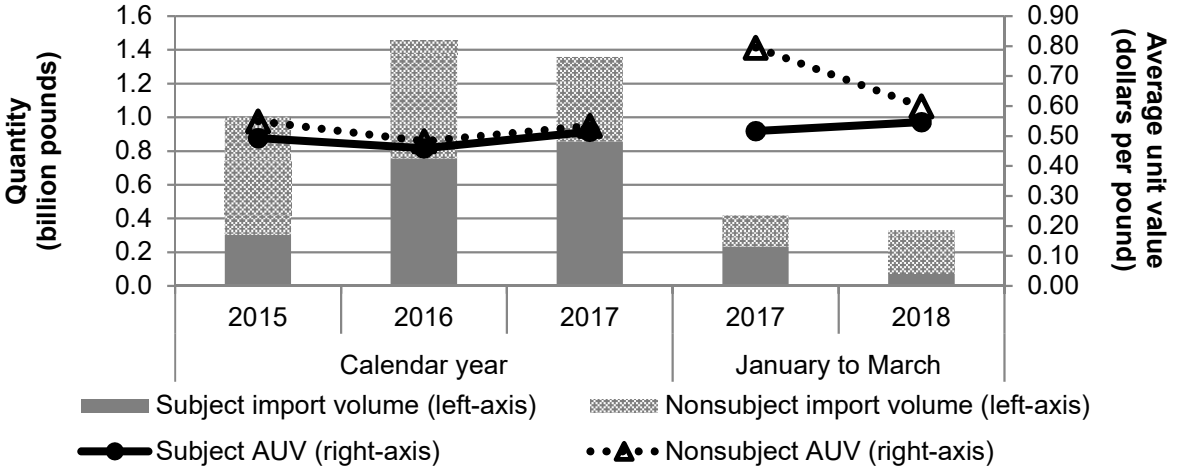
Item	Calendar year			January to March	
	2015	2016	2017	2017	2018
	Share of quantity (percent)				
U.S. imports from.--					
Brazil	***	***	***	***	***
Indonesia	***	***	***	***	***
Korea	***	***	***	***	***
Pakistan	***	***	***	***	***
Taiwan	***	***	***	***	***
Subject sources	30.1	51.2	63.0	55.4	21.5
Canada	***	***	***	***	***
Mexico	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	69.9	48.8	37.0	44.6	78.5
All import sources	100.0	100.0	100.0	100.0	100.0
	Share of value (percent)				
U.S. imports from.--					
Brazil	***	***	***	***	***
Indonesia	***	***	***	***	***
Korea	***	***	***	***	***
Pakistan	***	***	***	***	***
Taiwan	***	***	***	***	***
Subject sources	27.9	50.0	62.2	44.7	20.0
Canada	***	***	***	***	***
Mexico	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	72.1	50.0	37.8	55.3	80.0
All import sources	100.0	100.0	100.0	100.0	100.0
	Ratio to U.S. production				
U.S. imports from.--					
Brazil	***	***	***	***	***
Indonesia	***	***	***	***	***
Korea	***	***	***	***	***
Pakistan	***	***	***	***	***
Taiwan	***	***	***	***	***
Subject sources	5.4	12.5	15.3	19.3	5.1
Canada	***	***	***	***	***
Mexico	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	12.5	11.9	9.0	15.5	18.6
All import sources	17.9	24.4	24.3	34.9	23.7

[1] ***.

Note. – Shares and ratios shown as “0.0” represent values greater than zero, but less than “0.05” percent.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure IV-1
PET resin: U.S. import volumes and values, 2015-17, January to March 2017, and January to March 2018



Source: Compiled from data submitted in response to Commission questionnaires.

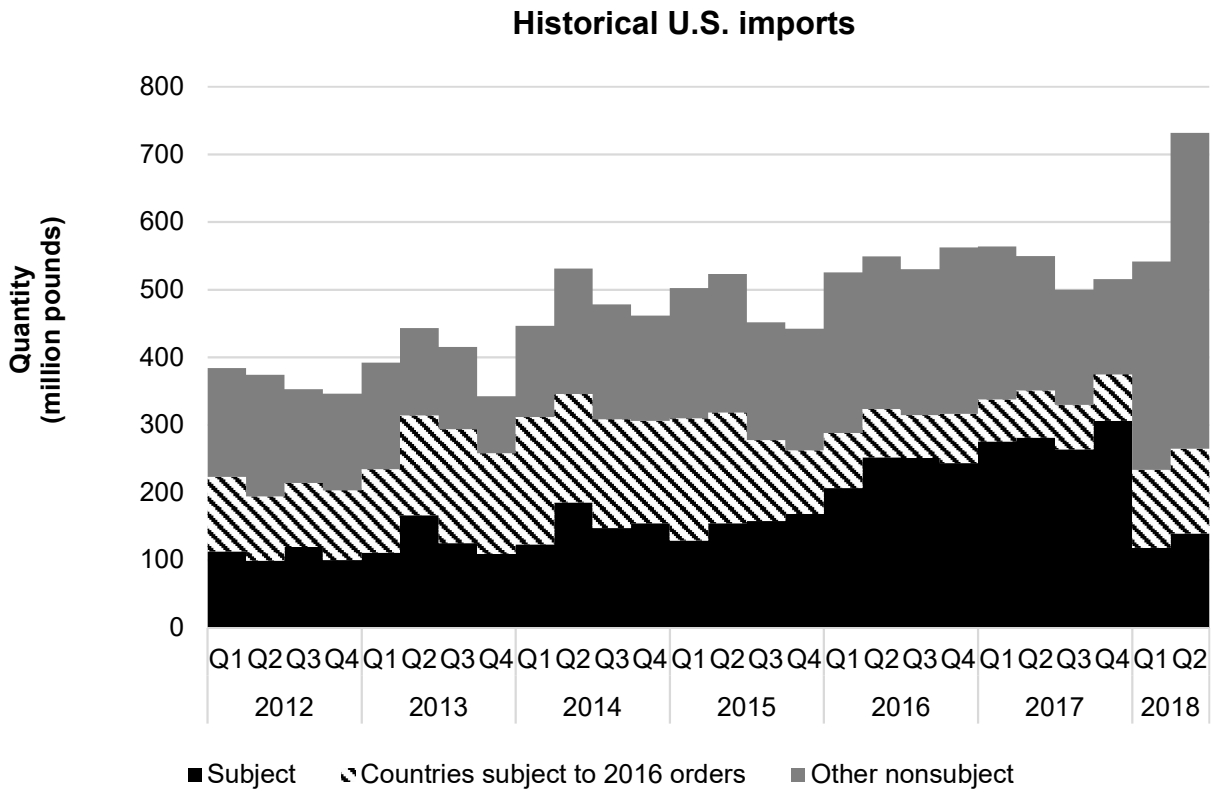
The average unit value of U.S. imports from Mexico fell from $*** per pound in 2015 to $*** per pound in 2016, but increased back to $*** per pound in 2017 and was $*** per pound in January-June 2018. Average unit value of U.S. imports from Canada decreased from $*** per pound in 2015 to $*** per pound in 2017, and was $*** per pound in January-March 2018 compared with $*** per pound in January-March 2017. The average unit values of U.S. imports from Canada and Mexico were higher than the average unit values of U.S. imports from all subject countries, except for Indonesia in 2015 and Brazil in 2017.

Historical U.S. imports

Figure IV-2 presents quarterly official U.S. import statistics from the first quarter of 2012[8] through the second quarter of 2018 for imports of merchandise from (1) countries that are subject to these current investigations (Brazil, Indonesia, Korea, Pakistan, and Taiwan), (2) countries that were the subject of the Commission's previous and related investigations on PET resin from Canada, China, India, and Oman, and (3) all other nonsubject countries. The data presented are somewhat overstated because they include not only the subject PET resin, but also items that are outside the scope of merchandise subject to these investigations (e.g., PETG, PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram, and PET resin that contains more than 50 percent recycled product by weight).

[8] The first year that data were collected in the previous related investigations concerning PET resin from Canada, China, India, and Oman was 2012.

Figure IV-2
PET resin: Quarterly historical U.S. imports, first quarter 2012 through second quarter 2018



Note.--Data presented may also include some volume of out-of-scope merchandise, such as PETG, PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram, and PET resin that contains more than 50 percent recycled product by weight.

Source: Official U.S. import statistics using HTS statistical reporting numbers 3907.61.0000, 3907.69.0000, 3907.60.0030, and 3907.60.0070, accessed September 14, 2018.

The quarterly import data show that PET resin imports from Canada, China, India, and Oman subject to the Commission's prior investigations, began to decline following the filing of those petitions in March 2015, remained at lower levels following the imposition of the orders in May 2016, and increased somewhat during the first two quarters of 2018. Conversely, quarterly U.S. imports from the five subject countries of these instant investigations increased following the filing of the 2015 petitions and imposition of the 2016 orders on PET resin imports from Canada, China, India, and Oman. These subject imports fell in the first and second quarters of 2018, while imports from nonsubject countries increased.

U.S. producers' imports

Two U.S. producers (*** and ***) imported PET resin from subject sources (Indonesia and Brazil, respectively) and three U.S. producers (***, ***, and ***) imported PET resin from Mexico and other nonsubject sources. Nan Ya certified that it did not import PET resin into the United States since January 1, 2015. In fact, there were no direct imports of PET resin from Korea, Pakistan, or Taiwan by U.S. producers since January 1, 2015. Data concerning U.S. producers' imports and purchases of PET resin are presented separately for each U.S. producer in part III of this report. Aggregate imports of U.S. PET resin producers are presented in table IV-3.

Table IV-3
PET resin: U.S. imports by U.S. producers, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

Brazil

M&G's imports from Brazil ***. *** following M&G's fourth quarter 2017 bankruptcy filing. M&G accounted for *** percent of total U.S. imports from Brazil during 2015 and *** percent during 2017. M&G's imports from Brazil, as a share of apparent U.S. consumption, ***.

Indonesia

*** imports from Indonesia increased from *** pounds in 2015 to *** pounds in 2017, and were substantially lower in January-March 2018 than in January-March 2017. *** accounted for *** percent of total U.S. imports from Indonesia during 2015, *** percent in 2016, *** percent during 2017, *** percent during January-March 2017, and *** percent during January-March 2018. *** imports from Indonesia, as a share of apparent U.S. consumption, grew from *** percent in 2016 to *** percent in 2017, but was *** percent during the first quarter of 2018.

Nonsubject countries

U.S. producers' imports from Mexico, which comprised all U.S. imports from Mexico, increased from *** pounds in 2015 to *** pounds in 2016, before declining to *** pounds in 2107. These imports were also lower in January-March 2018 than in January-March 2017. The share of apparent U.S. consumption held by these imports from Mexico grew from *** percent in 2015 to *** percent in 2016, before declining to *** percent in 2017. The share held by imports from Mexico was *** in the first quarter of 2017 and *** percent during the first quarter of 2018.

U.S. producers' imports from other nonsubject sources (Argentina, Russia, Thailand, and Turkey) fluctuated through the period of investigation, but were remarkably higher during the first quarter of 2018. These imports accounted for *** percent of total apparent U.S.

consumption during 2015-17 and *** percent during the first quarter of 2018. The share of total U.S. imports from the other nonsubject sources held by U.S. producers grew from *** percent during 2015, to *** percent in 2016, and further to *** percent during 2017. U.S. producers' imports accounted for *** percent of total U.S. imports from the other nonsubject sources during January-March 2017 and *** percent during January-March 2018.

Exports to the United States by foreign affiliates

All four domestic producers are related to PET resin producers in countries subject to these investigations. In particular, Indorama is related to three PET resin producers in Indonesia, Nan Ya is related to a PET resin producer in Taiwan, and DAK and, until recently, M&G, are related to foreign producers in Brazil.[9] In addition, the sale of M&G's West Virginia facility to Taiwan PET resin producer Far Eastern was finalized through bankruptcy proceedings in March 2018 and production at the Apple Grove facility under the new ownership began in July 2018. Aggregate exports of PET resin to the United States from producers in the subject countries that were affiliated with U.S. PET resin producers during January 2015-March 2018 are presented in table IV-4.

Table IV-4
PET resin: Exports to the United States from foreign firms affiliated with U.S. producers, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

Brazil

The export data presented for Brazil, as reported by M&G Polímeros Brasil SA ("M&G Brazil"), indicate that this affiliated firm *** (i.e., subsequent to M&G's bankruptcy filings in October 2017). M&G Brazil's exports to the United States ***. The share of apparent U.S. consumption held by M&G Brazil's exports to the United States was ***. M&G Brazil indicated in its response to the Commission's foreign producer questionnaire that it *** during 2018-19.

The data presentation does not include data from Brazilian PET resin producer Citepe, which was acquired by Alpek (parent of U.S. producer DAK) in April 2018 because the acquisition falls outside the time period presented in this table. Citepe indicated in its response to the Commission's foreign producer questionnaire that it *** during 2018-19.

Indonesia

The data presented for Indonesia are reported by Indorama Synthetics, Indorama Polypet, and Indorama Ventures. The affiliated Indonesian producers' exports to the United States during 2015 (*** pounds), 2016 (*** pounds), and 2017 (*** pounds) accounted for ***,

[9] Indorama Ventures (Thai parent of U.S. and Indonesian PET resin producers) acquired the M&G Polímeros Brasil PET resin facility on May 25, 2018.

***, and *** percent of total U.S. imports from Indonesia in 2015, 2016, and 2017, respectively. The share of apparent U.S. consumption held by the affiliated Indonesian producers' exports to the United States was *** percent in 2015, and *** percent in 2016 and 2017. The three Indonesian producers indicated in their responses to the Commission's foreign producer questionnaire that they ***.

Taiwan

The export data for Taiwan are not presented because the parent company of U.S. producer Nan Ya (Nan Ya Plastics Corporation (Taiwan)) did not provide a response to the Commission's foreign producer questionnaire in this proceeding. Nan Ya (U.S.) testified at the hearing *** that it has not imported in-scope PET resin from Taiwan. It also testified that it was not aware of any U.S. imports from its Taiwan parent entering the U.S. market.[10]

In addition, exports to the United States by Taiwan producer Far Eastern, which acquired the M&G West Virginia facility in March 2018, are not reflected in the data presented. In its response to the Commission's foreign producer questionnaire, Far Eastern reported that it ***.

CRITICAL CIRCUMSTANCES

On April 24, 2018, Commerce issued its preliminary determinations that "critical circumstances" exist with regard to imports of PET resin shipped by certain producers/ exporters from Indonesia, Korea, and Taiwan.[11] In these investigations, if both Commerce and the Commission make affirmative final critical circumstances determinations, certain subject imports may be subject to antidumping duties retroactive by 90 days from May 4, 2018, the effective date of Commerce's preliminary affirmative LTFV determinations. On September 24, 2018, Commerce issued its final determinations that "critical circumstances" exist with regard to imports of PET resin shipped by certain producers/exporters from Indonesia, Korea, and Taiwan.[12]

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[10] Hearing transcript, pp. 60-62 (Freeman).

[11] *Antidumping Duty Investigations on Polyethylene Terephthalate Resin From Indonesia, the Republic of Korea, and Taiwan; Preliminary Determinations of Critical Circumstances*, 83 FR 17791, April 24, 2018. When petitioners file timely allegations of critical circumstances, Commerce examines whether there is a reasonable basis to believe or suspect that (1) either there is a history of dumping and material injury by reason of dumped imports in the United States or elsewhere of the subject merchandise, or the person by whom, or for whose account, the merchandise was imported knew or should have known that the exporter was selling the subject merchandise at LTFV and that there was likely to be material injury by reason of such sales; and (2) there have been massive imports of the subject merchandise over a relatively short period.

[12] *Polyethylene Terephthalate Resin From Indonesia: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Determination of Critical Circumstances, in Part*, 83 FR 48278, September 24, 2018; *Polyethylene Terephthalate Resin From the Republic of Korea: Affirmative Final Determination*

Indonesia

Commerce issued a final affirmative critical circumstances determination with respect to imports of PET resin from Indonesia shipped by producers/exporters PT. Indorama Synthetics Tbk. ("Indorama Synthetics"), PT. Indorama Ventures Indonesia ("Indorama Ventures"), and PT. Indorama Polypet Indonesia ("Indorama Polypet"). Commerce also found that critical circumstances do not exist for all other producers or exporters not individually examined. Data on monthly U.S. imports from Indonesia that are subject to Commerce's final antidumping critical circumstances findings are presented in table IV-5 and figure IV-3. The monthly import data for the six-months before and after the filing of the petition on September 26, 2017 (April 2017-September 2017 and October 2017-March 2018) show that U.S. imports from firms receiving affirmative final antidumping duty critical circumstances determinations during the cumulative six-month period after the filing of the petition were *** percent lower than during the cumulative six-month period prior to the filing of the petition.

Table IV-5
PET resin: U.S. importers' U.S. imports from Indonesia subject to Commerce's final AD critical circumstances findings, April 2017 to March 2018

* * * * * * *

Figure IV-3
PET resin: U.S. imports from Indonesia subject to Commerce's final AD critical circumstances findings, April 2017 to March 2018

* * * * * * *

Of the six firms that reported U.S. imports of PET resin from Indonesia, one reported holding inventories of the imported merchandise in the United States that were produced in Indonesia by firms that received affirmative final critical circumstances determinations (i.e., by Indonesian producers Indorama Synthetics, Indorama Polypet, and Indorama Ventures). Reported U.S. importers' inventories of PET resin from Indonesia by this one importing firm amounted to *** pounds in December 2016, *** pounds in March 2017, *** pounds in December 2017, and *** pounds in March 2018.[13]

of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part, 83 FR 48283, September 24, 2018; and *Polyethylene Terephthalate Resin From Taiwan: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Determination of Critical Circumstances, in Part*, 83 FR 48287, September 24, 2018.

[13] Reported U.S. inventories of PET resin produced by the Indonesian producers receiving a negative critical circumstances determination amounted to *** pounds in December 2015.

Korea

Commerce issued a final affirmative critical circumstances determination with respect to imports of PET resin from Korea shipped by producer/exporter SK Chemicals Co., Ltd. ("SK Chemicals"), Lotte Chemical Corp. (REGD) ("Lotte Chemical"), and TK Chemical Corp. ("TK Chemical"), and it issued a negative final critical circumstances determination with respect to all other Korean producers/exporters not individually examined. Data on monthly U.S. imports from Korea that are subject to Commerce's final antidumping critical circumstances findings are presented in table IV-6 and figure IV-4. The monthly import data for the six months before and after the filing of the petition on September 26, 2017 (April 2017-September 2017 and October 2017-March 2018) show that U.S. imports from firms receiving affirmative final antidumping duty critical circumstances determinations during the cumulative six-month period after the filing of the petition were *** percent lower than during the cumulative six-month period prior to the filing of the petition.

Table IV-6
PET resin: U.S. importers' U.S. imports from Korea subject to Commerce's final AD critical circumstances findings, April 2017 to March 2018

* * * * * * *

Figure IV-4
PET resin: U.S. imports from Korea subject to Commerce's final AD critical circumstances findings, April 2017 to March 2018

* * * * * * *

Of the ten firms that reported U.S. imports of PET resin from Korea, six reported holding inventories of the imported merchandise in the United States that were produced in Korea by firms that received affirmative final critical circumstances determinations (i.e., by Korean producers Lotte Chemical, SK Chemicals, and TK Chemical). Reported U.S. importers' inventories of PET resin from Korea by these six importing firms amounted to *** pounds in December 2016, *** pounds in March 2017, *** pounds in December 2017, and *** pounds in March 2018.

Taiwan

Commerce issued final affirmative critical circumstances determination with respect to imports of PET resin from Taiwan shipped by producer/exporter Shinkong Synthetic Fibers Corp. ("Shinkong"), Far Eastern New Century Corp. ("FENC" or "Far Eastern"), Far Eastern Textile Ltd. ("Far Eastern Textile"), and Worldwide Polychem (HK), Ltd. ("Worldwide Polychem"), and it issued a final negative critical circumstances determination with respect to all other producers/exporters in Taiwan not individually examined. Data on monthly U.S. imports from Taiwan that are subject to Commerce's final antidumping critical circumstances findings are presented in table IV-7 and figure IV-5. The monthly import data for the six-months before and after the filing of the petition on September 26, 2017 (April 2017-September 2017

and October 2017-March 2018) show that U.S. imports from firms receiving an affirmative preliminary antidumping duty critical circumstances determination during the cumulative six-month period after the filing of the petition were *** percent higher than during the cumulative six-month period prior to the filing of the petition.

Table IV-7
PET resin: U.S. importers' U.S. imports from Taiwan subject to Commerce's final AD critical circumstances findings, April 2017 to March 2018

* * * * * * *

Figure IV-5
PET resin: U.S. imports from Taiwan subject to Commerce's final AD critical circumstances findings, April 2017 to March 2018

* * * * * * *

Of the eight firms that reported U.S. imports of PET resin from Taiwan, five reported holding inventories of the imported merchandise in the United States that were produced in Taiwan by firms that received affirmative preliminary critical circumstances determinations (i.e., by Taiwan producers Shinkong, Far Eastern, Far Eastern Textile, and Worldwide Polychem). Reported U.S. importers' inventories of PET resin from Taiwan by these five importing firms amounted to *** pounds in December 2016, *** pounds in March 2017, *** pounds in December 2017, and *** pounds in March 2018.

NEGLIGIBILITY

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[14] Negligible imports are generally defined in the Act, as amended, as imports from a country of merchandise corresponding to a domestic like product where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or the initiation of the investigation. However, if there are imports of such merchandise from a number of countries subject to investigations initiated on the same day that individually account for less than 3 percent of the total volume of the subject merchandise, and if the imports from those countries collectively account for more than 7 percent of the volume of all such merchandise imported into the United States during the applicable 12-month period, then imports from such countries are deemed not to be negligible.[15]

From September 2016 to August 2017, the most recent 12-month period preceding the filing of the petitions in these investigations, imports from each subject country accounted for

[14] Sections 703(a)(1), 705(b)(1), 733(a)(1), and 735(b)(1) of the Act (19 U.S.C. §§ 1671b(a)(1), 1671d(b)(1), 1673b(a)(1), and 1673d(b)(1)).

[15] Section 771 (24) of the Act (19 U.S.C § 1677(24)).

more than 3 percent of total U.S. imports of PET resin and the imports from those countries collectively accounted for more than 7 percent of the volume of all such merchandise imported into the United States. According to questionnaire data responses, imports from Brazil accounted for *** percent of total imports; imports from Indonesia accounted for *** percent; imports from Korea accounted for *** percent; imports from Pakistan accounted for *** percent; and imports from Taiwan accounted for *** percent. Imports from all subject countries collectively accounted for 58.9 percent of the volume of all such merchandise imported into the United States. Table IV-8 presents the individual shares of total imports accounted by subject countries by quantity during September 2016-August 2017 based on questionnaire data.

Table IV-8
PET resin: U.S. imports in the twelve months preceding the filing of the petitions, by source, September 2016 through August 2017

* * * * * * *

CUMULATION CONSIDERATIONS

In assessing whether imports should be cumulated, the Commission determines whether U.S. imports from the subject countries compete with each other and with the domestic like product and has generally considered four factors: (1) fungibility, (2) presence of sales or offers to sell in the same geographical markets, (3) common or similar channels of distribution, and (4) simultaneous presence in the market. Information regarding channels of distribution, market areas, and interchangeability appear in Part II. Additional information concerning fungibility, geographical markets, and simultaneous presence in the market is presented below.

Fungibility

In the preliminary phase of these investigations, the respondents argued that it is more difficult for U.S. producers to service the western region of the United States from their U.S. production facilities because of the lack of reliable, timely rail service to the West Coast of the United States and the cost of moving product by rail.[16] Respondents argued further that these difficulties have led U.S. producers to service the western and southwestern regions of the United States from their affiliated PET resin facilities in Mexico and Brazil rather than their U.S. production locations.[17]

[16] For the West Coast, the respondents describe the mode of transportation as "intermodal." That is, product is primarily shipped via rail, but is later transloaded from rail to bulk truck closer to point of consumption. Conference transcript, pp. 130-131 and 137 (Safieddin).

[17] Conference transcript, pp. 105 (Ream) and pp. 137-138 (Kaufman).

The Commission requested information concerning U.S. producers' and U.S. importers' U.S. commercial shipments of PET resin, by method of land delivery for calendar year 2017. These data are presented in table IV-9.

Table IV-9
PET resin: U.S. producers' and U.S. importers' commercial U.S. shipments by method of delivery, 2017

* * * * * * *

These data show that, in 2017, *** (*** percent) of the U.S. producer's U.S. commercial shipments of PET resin was shipped by rail, *** (*** percent) was shipped by truck, and *** percent was shipped by a combination of rail and truck. *** (*** percent) U.S. importers' U.S. commercial shipments of PET resin imported from subject countries were shipped solely by truck, with *** imports *** shipped solely by rail. Approximately *** (*** percent) of U.S. importers' U.S. commercial shipments of PET resin imported from nonsubject countries were shipped solely by rail, with *** (*** percent) shipped by a combination of truck and rail.

Presented in appendix D are data concerning U.S. producers' and subject U.S. importers' U.S. commercial shipments of PET resin during 2017, by top customers for product used in hot-fill applications and all other applications. Most sales were made to purchasers buying for applications other than hot-fill applications.

Geographical markets

PET resin produced in the United States is shipped nationwide.[18] In 2017, the official U.S. import statistics show that a majority of subject imports from Brazil and Pakistan entered through U.S. ports located on the eastern coast of the United States. Such imports accounted for 87.7 percent and 89.7 percent of total subject imports from each country, respectively. The majority of subject imports from Indonesia, Korea, and Taiwan entered through U.S. ports located on the western coast of the United States. Such imports accounted for 86.8 percent, 53.1 percent, and 75.2 percent of total subject imports from each country, respectively. Most imports from nonsubject sources, a relatively large portion of which were from Mexico, entered through U.S. ports on the southern border (52.8 percent). Table IV-10 presents U.S. import quantities of PET resin by source and border of entry during 2017.[19] The data presented include in-scope PET resin, as well as a quantity of out-of-scope merchandise, such as PETG, PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram, and PET resin with more than 50 percent recycled product by weight.

Presence in the market

Table IV-11 and figures IV-6 and IV-7 present monthly official U.S. import statistics for subject countries and nonsubject sources. The data presented include in-scope PET resin, as well as a quantity of out-of-scope merchandise, such as PETG, PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram, and PET resin with more than 50 percent recycled product by weight. The monthly import statistics indicate that U.S. imports of PET resin from the subject countries were present in each month during January 2015-June 2018.

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[18] See Part II for additional information on geographic markets.

[19] The "East" border of entry includes the following Customs entry districts for PET resin: Baltimore, MD; Boston, MA; Buffalo, NY; Charleston, SC; Charlotte, NC; New York, NY; Norfolk, VA; Ogdensburg, NY; Philadelphia, PA; Portland, ME; San Juan, PR; Savannah, GA; St. Albans, VT; and Washington, DC. The "North" border of entry includes the following Customs entry districts for PET resin: Chicago, IL; Cleveland, OH; Detroit, MI; Duluth, MN; Great Falls, MT; Minneapolis, MN; Pembina, ND; and St. Louis, MO. The "North" border of entry includes the following Customs entry districts for PET resin: Dallas-Fort Worth, TX; El Paso, TX; Houston-Galveston, TX; Laredo, TX; Miami, FL; Mobile, AL; New Orleans, LA; and Tampa, FL. The "West" border of entry includes the following Customs entry districts for PET resin: Anchorage, AK; Columbia-Snake, OR; Honolulu, HI; Los Angeles, CA; Nogales, AZ; San Diego, CA; San Francisco, CA; and Seattle, WA.

Table IV-10
PET resin: U.S. imports, by source and by border of entry, 2017

Item	Border of entry				
	East	North	South	West	All borders
	Quantity (1,000 pounds)				
U.S. imports from.--					
Brazil	259,693	197	25,690	10,516	296,096
Indonesia	13,769	---	---	90,768	104,537
Korea	65,130	33,449	7,210	119,672	225,461
Pakistan	157,896	3,209	6,451	8,537	176,093
Taiwan	72,945	390	5,998	240,944	320,277
Subject sources	569,434	37,244	45,350	470,436	1,122,464
Canada	112,180	121,218	0	1,305	234,703
Mexico	19,612	---	515,316	24,642	559,570
All other sources	151,093	12,633	16,322	31,783	211,831
Nonsubject sources	282,885	133,850	531,639	57,730	1,006,104
All import sources	852,319	171,095	576,989	528,166	2,128,568
	Share across (percent)				
U.S. imports from.--					
Brazil	87.7	0.1	8.7	3.6	100.0
Indonesia	13.2	---	---	86.8	100.0
Korea	28.9	14.8	3.2	53.1	100.0
Pakistan	89.7	1.8	3.7	4.8	100.0
Taiwan	22.8	0.1	1.9	75.2	100.0
Subject sources	50.7	3.3	4.0	41.9	100.0
Canada	47.8	51.6	0.0	0.6	100.0
Mexico	3.5	---	92.1	4.4	100.0
All other sources	71.3	6.0	7.7	15.0	100.0
Nonsubject sources	28.1	13.3	52.8	5.7	100.0
All import sources	40.0	8.0	27.1	24.8	100.0
	Share down (percent)				
U.S. imports from.--					
Brazil	30.5	0.1	4.5	2.0	13.9
Indonesia	1.6	---	---	17.2	4.9
Korea	7.6	19.5	1.2	22.7	10.6
Pakistan	18.5	1.9	1.1	1.6	8.3
Taiwan	8.6	0.2	1.0	45.6	15.0
Subject sources	66.8	21.8	7.9	89.1	52.7
Canada	13.2	70.8	0.0	0.2	11.0
Mexico	2.3	---	89.3	4.7	26.3
All other sources	17.7	7.4	2.8	6.0	10.0
Nonsubject sources	33.2	78.2	92.1	10.9	47.3
All import sources	100.0	100.0	100.0	100.0	100.0

Note.--Shares and ratios shown as “0.0” represent values greater than zero, but less than “0.05” percent.

Note.--Data presented may also include some volume of out-of-scope merchandise, such as PETG, PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram, and PET resin that contains more than 50 percent recycled product by weight.

Source: Official U.S. import statistics using HTS statistical reporting numbers 3907.61.0000, 3907.69.0000, 3907.60.0030, and 3907.60.0070, accessed July 18, 2018.

Table IV-11
PET resin: Monthly U.S. imports, by sources, January 2015 to June 2018

Item	Source					
	Brazil	Indonesia	Korea	Pakistan	Taiwan	Subject sources
	Quantity (1,000 pounds)					
2015.---						
January	260	2,280	8,708	1,937	7,295	20,480
February	133	2,425	7,810	3,104	5,285	18,757
March	697	6,184	9,722	2,745	8,614	27,962
April	2,456	7,654	6,264	3,182	11,911	31,466
May	4,583	2,813	10,917	1,581	25,782	45,676
June	5,698	1,591	11,330	2,765	26,383	47,767
July	6,930	2,935	11,656	2,521	20,916	44,958
August	4,912	4,438	9,331	3,715	18,733	41,129
September	4,058	2,982	10,747	5,835	30,914	54,535
October	7,949	7,014	13,761	6,948	31,062	66,734
November	10,948	3,581	12,107	4,144	29,109	59,890
December	4,717	3,171	10,378	2,951	20,100	41,317
2016.---						
January	16,770	4,910	10,017	5,820	25,717	63,235
February	16,996	3,788	10,838	6,725	23,356	61,703
March	27,266	4,359	14,347	5,558	30,022	81,553
April	30,862	6,427	12,188	3,104	21,700	74,281
May	29,350	9,805	14,267	6,584	33,440	93,445
June	38,241	7,810	10,271	3,395	24,125	83,843
July	26,440	8,763	14,499	11,818	26,613	88,134
August	23,300	10,316	16,498	12,055	29,013	91,181
September	18,834	7,800	13,411	8,811	22,746	71,602
October	15,700	5,657	12,848	8,648	31,838	74,690
November	22,722	11,262	12,639	5,391	34,408	86,421
December	21,709	7,369	15,631	13,911	23,484	82,104
2017.---						
January	26,093	6,435	12,710	11,355	22,811	79,404
February	29,210	5,129	18,218	6,329	29,105	87,990
March	35,903	10,098	21,752	10,758	28,890	107,402
April	26,982	12,588	14,308	17,864	21,017	92,759
May	23,435	13,703	25,944	15,213	25,306	103,602
June	25,519	7,609	18,610	11,187	21,519	84,444
July	29,425	6,192	16,263	16,664	22,054	90,598
August	25,675	6,869	9,977	18,146	25,639	86,306
September	38,432	3,362	15,095	13,147	16,500	86,537
October	17,159	8,161	16,724	10,160	30,350	82,555
November	10,117	14,452	39,959	24,119	51,877	140,524
December	8,146	9,939	15,900	21,149	25,208	80,343
2018.---						
January	214	2,704	6,129	11,298	20,993	41,338
February	169	3,218	6,353	9,578	12,060	31,378
March	222	3,032	5,873	8,843	18,964	36,934
April	254	3,152	7,810	26,368	16,511	54,095
May	85	2,536	8,352	5,020	17,778	33,771
June	127	2,859	7,802	3,783	11,501	26,072

Table continued on next page.

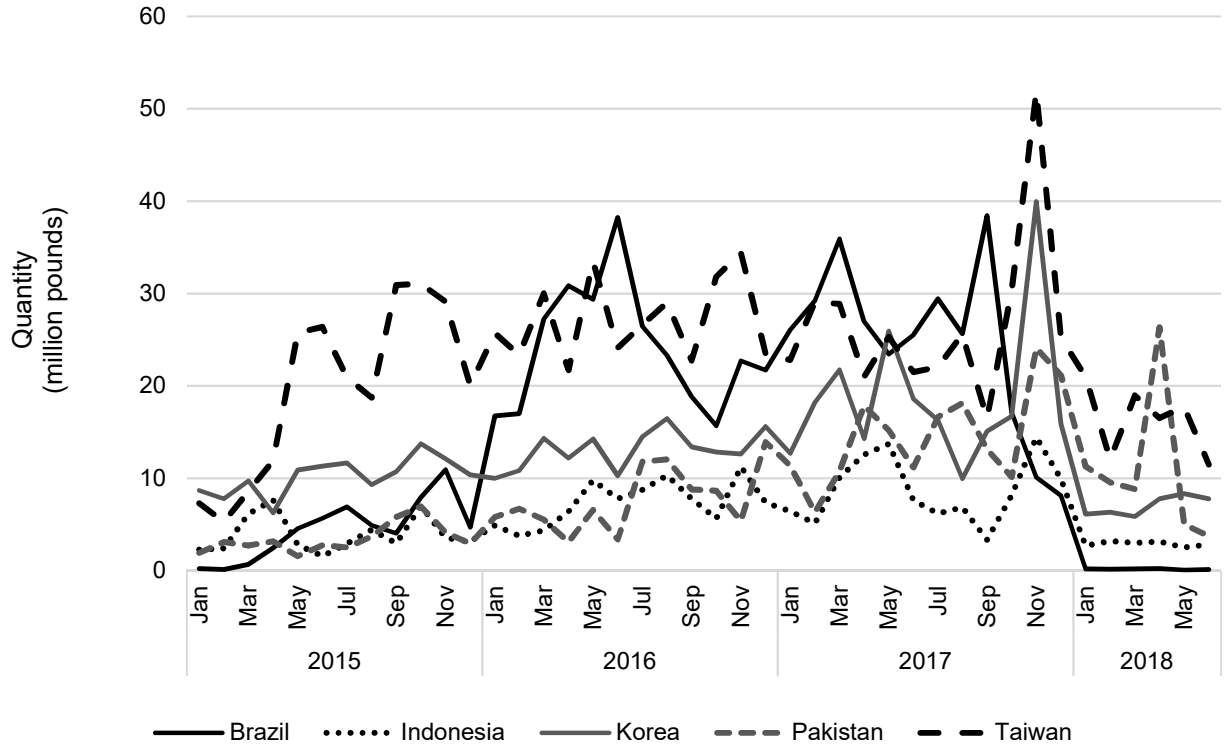
Table IV-11—Continued
PET resin: Monthly U.S. imports, by sources, January 2015 to June 2018

Item	Source				
	Canada	Mexico	All other sources	Nonsubject sources	All import sources
	Quantity (1,000 pounds)				
2015.---					
January	31,099	48,113	82,980	162,192	182,671
February	31,207	48,083	53,010	132,301	151,058
March	34,052	46,066	60,377	140,495	168,457
April	32,019	47,811	67,404	147,234	178,699
May	27,082	49,034	51,781	127,897	173,573
June	28,968	59,252	34,869	123,088	170,855
July	26,075	45,500	31,601	103,176	148,134
August	29,430	44,662	30,924	105,016	146,145
September	25,788	42,676	34,236	102,700	157,235
October	24,415	36,140	31,553	92,107	158,841
November	23,935	43,976	24,757	92,669	152,558
December	21,661	46,030	21,485	89,177	130,494
2016.---					
January	23,162	52,694	19,066	94,922	158,157
February	23,775	51,071	26,281	101,127	162,829
March	26,836	65,776	30,230	122,842	204,395
April	23,710	47,666	28,672	100,048	174,329
May	18,596	51,838	34,818	105,252	198,697
June	19,680	48,912	23,400	91,992	175,835
July	22,038	60,996	21,407	104,441	192,574
August	17,671	47,983	24,371	90,026	181,207
September	17,335	51,712	15,952	85,000	156,602
October	18,366	59,095	18,849	96,311	171,001
November	22,635	62,564	30,650	115,848	202,270
December	19,219	60,654	27,021	106,895	188,998
2017.---					
January	21,541	58,452	17,637	97,630	177,034
February	17,083	64,541	11,588	93,211	181,202
March	17,871	68,148	11,955	97,974	205,376
April	18,711	59,416	11,910	90,038	182,796
May	17,360	58,901	16,317	92,578	196,180
June	30,853	37,460	17,782	86,095	170,539
July	24,378	59,111	15,006	98,495	189,093
August	19,101	43,620	15,044	77,766	164,072
September	18,042	28,050	14,032	60,125	146,662
October	19,319	15,075	19,739	54,133	136,688
November	15,246	12,580	15,034	42,860	183,384
December	15,197	54,216	45,787	115,200	195,543
2018.---					
January	22,162	45,448	65,076	132,685	174,023
February	20,324	38,123	52,881	111,328	142,706
March	18,353	78,103	91,336	187,792	224,726
April	19,692	89,088	92,015	200,795	254,890
May	16,961	85,355	107,185	209,501	243,272
June	33,119	77,788	96,400	207,307	233,379

Note.--Data presented may also include out-of-scope merchandise, such as PETG, PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram, and PET resin with more than 50 percent recycled product by weight.

Source: Official U.S. import statistics using HTS statistical reporting numbers 3907.61.0000, 3907.69.0000, 3907.60.0030, and 3907.60.0070, accessed July 18, 2018.

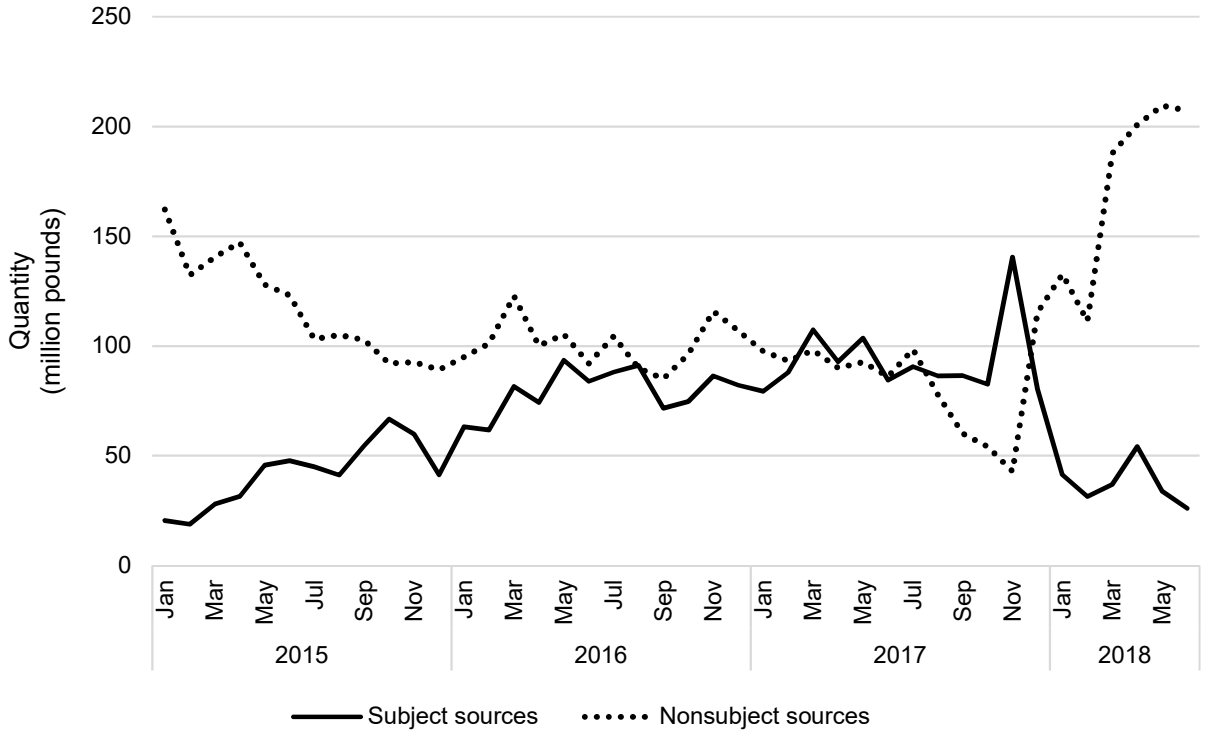
Figure IV-6
PET resin: Monthly U.S. imports from subject sources, January 2015 to June 2018



Note.--Data presented may also include out-of-scope merchandise, such as PETG, PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram, and PET resin with more than 50 percent recycled product by weight.

Source: Official U.S. import statistics using HTS statistical reporting numbers 3907.61.0000, 3907.69.0000, 3907.60.0030, and 3907.60.0070, accessed July 18, 2018.

Figure IV-7
PET resin: Monthly U.S. imports from all sources, January 2015 to June 2018



Note.--Data presented may also include out-of-scope merchandise, such as PETG, PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram, and PET resin with more than 50 percent recycled product by weight.

Source: Official U.S. import statistics using HTS statistical reporting numbers 3907.61.0000, 3907.69.0000, 3907.60.0030, and 3907.60.0070, accessed July 18, 2018.

APPARENT U.S. CONSUMPTION

Apparent U.S. consumption of PET resin is largely driven by demand for water bottles, packaging, and carpeting.[20] Table IV-12 and figure IV-8 present data on apparent U.S. consumption for PET resin for 2015-17, January-March 2017, and January-March 2018. Apparent consumption, by quantity, increased from 6.3 billion pounds in 2015 to 7.0 billion pounds in 2017, equivalent to a 10.8 percent increase. It was 0.8 percent lower in the first quarter of 2018 than it was in the comparable period of 2017. The value of apparent U.S. consumption declined from $3.7 billion in 2015 to $3.5 billion in 2016, before increasing to $3.8 billion in 2017, an overall increase of 2.6 percent from 2015 to 2017. The value of apparent consumption during the first quarter of 2018 was 13.8 percent higher than reported during the comparable period in 2017.

U.S. MARKET SHARES

U.S. market share data for PET resin are presented in table IV-13. U.S. producers' share of the domestic market, by quantity, fell by 4.0 percentage points, from 84.9 percent of the market in 2015 to 80.9 percent of the market in 2017. During the first quarter of 2018, the U.S. producers held 81.1 percent of the U.S. market. On the other hand, subject imports' share of the U.S. market increased by 7.7 percentage points from 4.2 percent of the U.S. market in 2015 to 11.9 percent of the U.S. market in 2017. Each of the subject countries' shares of the U.S. market increased from 2015 to 2017 with imports from *** experiencing the largest increase. However, subject imports held 6.8 percent of the U.S. market during the first quarter of 2018 compared with 12.5 percent of the U.S. market during the first quarter of 2017. Nonsubject countries' share of the domestic market, by quantity, declined by 3.6 percentage points—from 10.9 percent of the market in 2015 to 7.2 percent of the market in 2017. During the first quarter of 2018, nonsubject countries held 12.1 percent of the U.S. market compared with 11.2 percent during the first quarter of 2017.

M&G's U.S. shipments of imports from Brazil together with Indorama's U.S. shipments of imports from *** accounted for *** percent of apparent U.S. consumption in 2015, *** percent in 2016, *** percent in 2017, *** percent in the first quarter of 2017, and *** percent in the first quarter of 2018. The share of apparent consumption held by U.S. shipments of imports from nonsubject countries made by *** combined were *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in the first quarter of 2017, and *** percent in the first quarter of 2018. The U.S. producers' U.S. shipments of imports from subject and nonsubject sources together with U.S. producers' U.S. shipments of domestically produced PET resin represented *** percent of apparent U.S. consumption in 2015, *** percent in 2016, *** percent in 2017, *** percent in the first quarter of 2017, and *** percent in the first quarter of 2018.

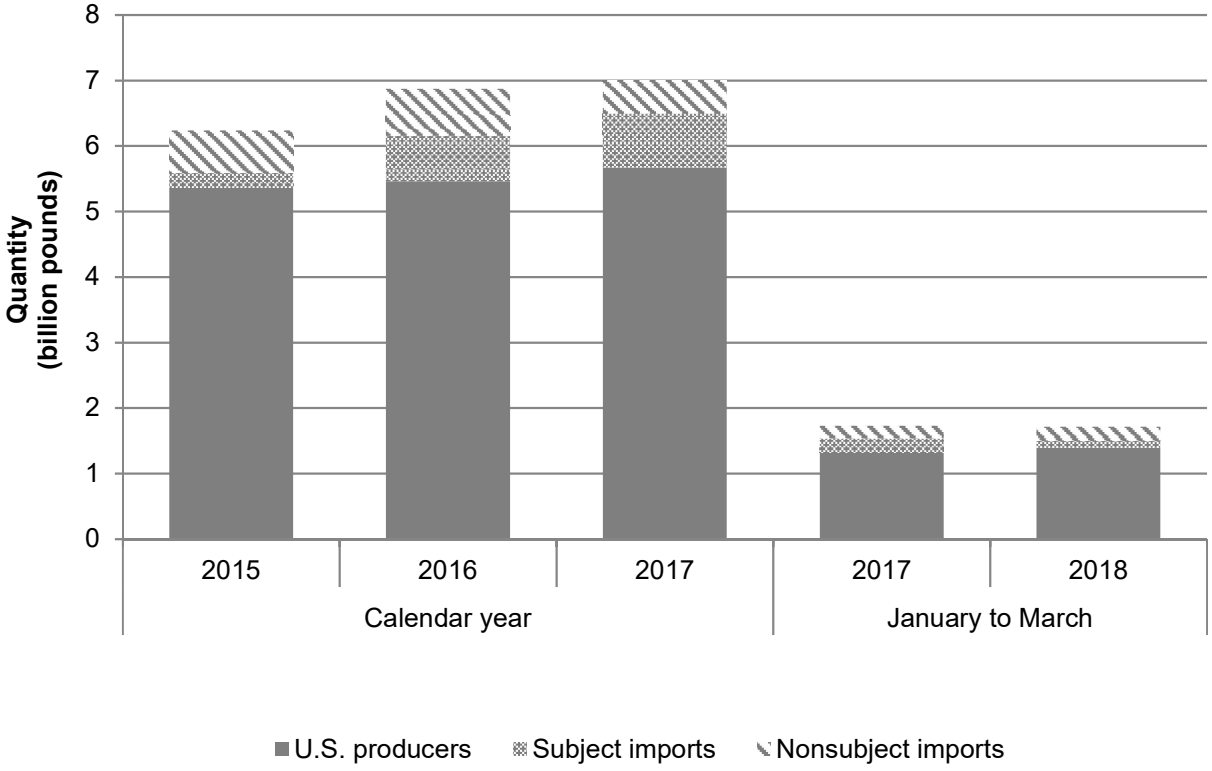
[20] Conference transcript, p. 45 (Cullen); conference transcript, p. 144 (Ream).

Table IV-12
PET resin: Apparent U.S. consumption, 2015-17, January to March 2017, and January to March 2018

Item	Calendar year			January to March	
	2015	2016	2017	2017	2018
	Quantity (1,000 pounds)				
U.S. producers' U.S. shipments	5,369,453	5,462,433	5,668,234	1,318,225	1,389,555
U.S. importers' U.S. shipments from.--					
Brazil	***	***	***	***	***
Indonesia	***	***	***	***	***
Korea	***	***	***	***	***
Pakistan	***	***	***	***	***
Taiwan	***	***	***	***	***
Subject sources	265,665	688,945	831,253	216,086	116,568
Canada	***	***	***	***	***
Mexico	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	687,027	719,335	507,360	193,880	207,384
All import sources	952,692	1,408,280	1,338,613	409,966	323,952
Apparent U.S. consumption	6,322,145	6,870,713	7,006,847	1,728,191	1,713,507
	Value (1,000 dollars)				
U.S. producers' U.S. shipments	3,141,521	2,816,592	3,054,277	710,313	859,678
U.S. importers' U.S. shipments from.--					
Brazil	***	***	***	***	***
Indonesia	***	***	***	***	***
Korea	***	***	***	***	***
Pakistan	***	***	***	***	***
Taiwan	***	***	***	***	***
Subject sources	138,034	328,810	437,923	111,554	71,360
Canada	***	***	***	***	***
Mexico	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	388,725	353,862	270,333	105,030	127,104
All import sources	526,759	682,672	708,256	216,584	198,464
Apparent U.S. consumption	3,668,280	3,499,264	3,762,533	926,897	1,058,142

Source: Compiled from data submitted in response to Commission questionnaires.

Figure IV-8
PET resin: Apparent U.S. consumption, 2015-17, January to March 2017, and January to March 2018



Source: Compiled from data submitted in response to Commission questionnaires.

Table IV-13
PET resin: Market shares, 2015-17, January to March 2017, and January to March 2018

Item	Calendar year			January to March	
	2015	2016	2017	2017	2018
	Quantity (1,000 pounds)				
Apparent U.S. consumption	6,322,145	6,870,713	7,006,847	1,728,191	1,713,507
	Share of quantity (percent)				
U.S. producers' U.S. shipments	84.9	79.5	80.9	76.3	81.1
U.S. importers' U.S. shipments from.--					
Brazil	***	***	***	***	***
Indonesia	***	***	***	***	***
Korea	***	***	***	***	***
Pakistan	***	***	***	***	***
Taiwan	***	***	***	***	***
Subject sources	4.2	10.0	11.9	12.5	6.8
Canada	***	***	***	***	***
Mexico	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	10.9	10.5	7.2	11.2	12.1
All import sources	15.1	20.5	19.1	23.7	18.9
	Value (1,000 dollars)				
Apparent U.S. consumption	3,668,280	3,499,264	3,762,533	926,897	1,058,142
	Share of value (percent)				
U.S. producers' U.S. shipments	85.6	80.5	81.2	76.6	81.2
U.S. importers' U.S. shipments from.--					
Brazil	***	***	***	***	***
Indonesia	***	***	***	***	***
Korea	***	***	***	***	***
Pakistan	***	***	***	***	***
Taiwan	***	***	***	***	***
Subject sources	3.8	9.4	11.6	12.0	6.7
Canada	***	***	***	***	***
Mexico	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	10.6	10.1	7.2	11.3	12.0
All import sources	14.4	19.5	18.8	23.4	18.8

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Compiled from data submitted in response to Commission questionnaires.

PART V: PRICING DATA

FACTORS AFFECTING PRICES

Raw material costs

Two crude oil-based raw materials, monoethylene glycol ("MEG") and purified terephthalic acid ("PTA"), historically account for over 75 percent of the cost of producing PET resin.[1] In general, production of 1 kilogram of PET resin requires 850 grams of PTA and 350 grams of MEG.[2] In these investigations, raw materials as a share of U.S. producers' cost of goods sold were relatively stable and ranged from *** percent in 2015 to *** percent in 2017.

Petitioners estimate that PTA and MEG represent the majority of input costs, *** and ***, respectively. Petitioners estimate that isophthalic acid (IPA) represents a small share of costs (*** percent).[3] As shown in figure V-1, prices of PTA, MEG, and IPA have fluctuated since January 2015. Prices of MEG and PTA declined from 2015 to early 2016, but have risen since then, first somewhat smoothly in 2016, but more volatilely in 2017. Overall, prices of MEG and PTA increased *** percent and *** percent, respectively, from January 2015 to June 2018. The price of IPA was relatively stable until December 2016, after which it increased by *** percent to its peak in September and October of 2017.[4]

Figure V-1
PTA, MEG and IPA monthly prices, January 2015-June 2018

* * * * * * *

Transportation costs to the U.S. market

Transportation costs for PET resin shipped from subject countries to the United States averaged 10.0 percent for Brazil, 14.6 percent for Indonesia, 5.6 percent for Korea, 7.9 percent for Pakistan, and 6.0 percent for Taiwan during 2017. These estimates were derived from official import data and represent the transportation costs and other charges on imports.[5]

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[1] *Polyethylene Terephthalate (PET) Resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan, Inv. Nos. 731-TA-1381-1397 (Preliminary)*, USITC Publication 4740, November 2017, p. V-1.

[2] Ibid., p. V-1.

[3] Petitioners' posthearing brief, exhibit 2, confidential slide 39.

[4] This large increase in the cost of IPS relative to the costs of PTA and MEG would increase IPA's share of total costs if the share of IPA in PET resin was unchanged. Respondent Novatex estimated that the increase in the price of IPA "contributed as much as $0.03" per pound to the cost to PET resin production. Novatex's posthearing brief, exhibit 1, p. 19.

[5] The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2017 and then dividing by the customs value based on the HTS subheadings 3907.61.00 and 3907.69.00.

U.S. inland transportation costs

All 4 responding U.S. producers and all 11 responding importers reported that they typically arrange transportation to their customers. U.S. producers reported that their U.S. inland transportation costs ranged from 3 to 8 percent while most responding importers reported costs of 2 to 8 percent.[6]

Firms that imported PET resin for their own use were also requested to estimate their U.S. inland transportation costs. Three importers provided estimates ranging from 1 to 5 percent. Responses by country were: Brazil (no response), Indonesia (*** percent), Korea (*** percent), Pakistan (*** percent), and Taiwan (*** percent).

PRICING PRACTICES

Pricing methods

Most U.S. producers (3 of 4) and importers (9 of 12 responding) reported using both transaction-by-transaction negotiations and contracts to set prices (table V-1). The other firms used only one of the two methods to set prices.

Table V-1
PET resin: U.S. producers' and importers' reported price setting methods, by number of responding firms[1]

Method	U.S. producers	Importers
Transaction-by-transaction	4	11
Contract	3	10
Set price list	---	---
Other	---	---
Responding firms	4	12

[1] The sum of responses down may not add up to the total number of responding firms as each firm was instructed to check all applicable price setting methods employed.

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. producers reported selling most of their PET resin under long-term contracts and importers related to U.S. producers ***. Importers sold the majority of their PET resin using spot sales (tables V-2). U.S. producers' imports, however, *** than other imports. Petitioners reported that their contracts take into account the major raw materials MEG and PTA, with monthly adjustments.[7] Respondents claim that, because most imports are sold on the spot market while most U.S. production is sold under contracts, import prices tend to be more

[6] One importer each reported transportation costs of less than 1 percent and 15 percent.
[7] Hearing transcript, p. 37 (Cullen).

responsive to market conditions such as short supply and changes in the cost of all raw materials.[8]

Table V-2
PET resin: U.S. producers' (by firm) and (subject) importers' related to U.S. producers and unrelated to U.S. producers shares of U.S. commercial shipments by type of sale, 2017

Producers	Contract			Spot
	Long term	Annual	Short term	
	Share (percent)			
DAK	***	***	***	***
Indorama	***	***	***	***
M&G	***	***	***	***
Nan Ya	***	***	***	***
All U.S. producers	58.6	24.3	7.3	9.7
Types of importers	**Share (percent)**			
U.S. importers that are also U.S. producers[1]	***	***	***	***
Other U.S. importers	***	***	***	***
All U.S. importers	27.5	9.4	11.6	51.6

Note.--Because of rounding, figures may not add to the totals shown.

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. producers reported that long-term contracts typically last 2 to 3 years, allow price renegotiations and have meet-or-release provisions. Three of four U.S. producers' annual contracts include meet-or-release provisions, and two of four producers' contracts allow price renegotiations during the contract. U.S. producers reported that short-term contracts that last from 1 to 6 months, and most of these contracts allowed price renegotiations during the contract.

Importers reported that long-term contracts last from 2 to 5 years, although one firm reported that its contracts were "on going."[9] Importers reported that long-term contracts allow price renegotiations during the contract, but most firms reported that they do not have meet-or-release provisions. Importers reported short-term contracts typically lasting from 1 to 3 months, not allowing price renegotiations during the contract, fixing both price and quantity, and not containing meet-or-release provisions. No importers' annual contracts allow price renegotiations during the contract, most do not have meet-or-release provisions, and half of the firms fix quantities only.

Eight purchasers reported that they purchase product daily, 4 purchase weekly, and 15 purchase monthly.[10] Nineteen of 25 responding purchasers reported that their purchasing frequency had not changed since 2015. Six purchasers reported that their purchase patterns had changed, with four of these firms stating that the reason was the increased difficulty

[8] Respondents' prehearing brief, p. 17.

[9] ***

[10] Some purchasers provided more than one response.

getting supply.[11] Most (19 of 24 responding) purchasers contact 1 to 6 suppliers before making a purchase, although some purchasers reported contacting as many as 15 suppliers. The three largest purchasers (***) reported contacting at least three suppliers before making a purchase.

Sales terms and discounts

U.S. producers and importers typically quote prices on a delivered basis. All U.S. producers reported offering total volume discounts for both their domestic product and for their imports (if they had any). Most responding importers (7 of 13 responding) reported no discount policy. Two producers reported sales terms of net 60 days, one reported net 30 days and one reported end of the month plus 30 days. Most importers (9 of 11 responding) reported sales terms of net 30 days, six importers reported selling net 60, and six reported "other terms."[12]

Price leadership

Most purchasers (18 of 25) reported that the market has at least one price leader. Most of the price leaders listed were U.S. producers. Fifteen purchasers reported DAK was a price leader, 10 listed Indorama, 6 listed M&G, and 4 listed Nan Ya. Purchasers also listed firms related to DAK (ALFA (1 purchaser) and Alpek (2 purchasers)) and a firm related to Indorama (Auriga (2 purchasers)); no other price leaders were listed. A number of purchasers reported that these firms lead the market by announcing price increases. One purchaser (***) only listed M&G as the price leader; it reported that M&G was "aggressively looking to lock in volume for 2018 in early 2017, quoting prices based on supply from their still under construction world scale plant at Corpus Christi, which was planned to begin production in late 2017." *** alleged that the other U.S. producers reduced their prices because of M&G's price reduction, not because of imports. Petitioners claim, however, that subject imports used low prices to gain market and take volume from the U.S. producers' sales.[13]

Respondents claim that U.S. producers are the price leaders and competition among them for sales reduced prices. PepsiCo reported, "M&G aggressively pursued large sales volumes in the market," providing the new volume from its imports from Mexico and Brazil and planning to shift the volumes to its new facility in Corpus Christi when it was completed. PepsiCo argued that, "pricing competition was between U.S. producers only" not imports.[14] Graham reported that "the planned opening of the world's largest PET plant" in Corpus Christi led M&G and DAK to need customers to guarantee demand for the product that was expected to become available. It added that this created increased competition among U.S. producers

[11] One of the remaining two purchasers reported that purchase patterns had changed because of increased business and the other did not report why its purchase patterns had changed.

[12] Other terms included net 45, net 75, and cash in advance.

[13] Hearing transcript, pp. 24, 28, 34 (McNaull, Freeman, Paramasivam).

[14] Hearing transcript, p. 141 (Berry).

driving prices downward, rather than imports doing so.[15] Niagara claimed that M&G was the key factor in the price erosion or lack of price increase because M&G "extended sizable discounts in an attempt to pre-sell the Corpus Christi capacity {and} with every delay in the start of that facility {it} saw more and more price erosion in the marketplace."[16]

PRICE DATA

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of the following PET resin products shipped to unrelated U.S. customers during January 2015-March 2018.[17]

Product 1.--PET resin, being either a clear homo- or co-polymer, and having an intrinsic viscosity of 0.72 IV to 0.84 IV, in the solid state form. This PET resin product is typically used in water bottle applications.

Product 2.--PET resin, being either a clear homo- or co-polymer, and having an intrinsic viscosity of 0.72 IV to 0.84 IV, in the solid state form. This PET resin product is typically used in sheet and strapping.

Product 3.--PET resin, being either a clear homo- or co-polymer, and having an intrinsic viscosity of 0.78 IV to 0.86 IV, in the solid state form. This PET resin product is typically used in carbonated soft drink applications.

Product 4.--PET resin, being mainly a co-polymer, and having an intrinsic viscosity of 0.75 IV to 0.86 IV, in the solid state form. This PET resin product is typically used in heat set or hot fill applications; food, household, and other products.

[15] Hearing transcript, pp. 149-150 (Ream).

[16] Hearing transcript, p. 243 (Safieddin).

[17] After the prehearing report, ***. Respondents reported that there was no reason to exclude ***. U.S. producers and importers were contacted ***. ***. Producers and importers were asked if the price of bio PET differed from other forms of PET resin used in the same applications. Most responding firms did not know; however, the remainder reported that bio PET tended to be higher priced than other forms of PET resin used in the same applications. ***.

Four U.S. producers and eight importers[18] [19] provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[20] [21] Pricing data reported by these firms accounted for approximately *** percent of U.S. producers' shipments of PET resin in 2017, 100 percent of shipments from Brazil, *** percent of shipments from Indonesia,[22] 80.9 percent of shipments from Korea, 55.4 percent of shipments from Pakistan, and 87.7 percent of shipments from Taiwan. Petitioners report that PET resin is normally sold on a delivered basis and contend that import values may have include transportation costs.[23]

Price data for products 1-4 are presented in tables V-3 to V-6 and figures V-2 to V-5. Nonsubject country prices are presented in appendix E.

Table V-3
PET resin: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by quarters, January 2015-March 2018

* * * * * * *

Table V-4
PET resin: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by quarters, January 2015-March 2018

* * * * * * *

Table V-5
PET resin: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by quarters, January 2015-March 2018

* * * * * * *

[18] Petitioners requested the Commission to include price data of certain importers that provided data in the preliminary phase of the investigation but that had not provided data in the final phase of the investigation. Hearing transcript p. 98 (Rosenthal). ***. These data were not included because ***. Such quarter to quarter variation in computed prices indicates that there may have been major errors in the data that they provided. ***.

[19] Petitioners requested that price data from ***. ***.

[20] Per-unit pricing data are calculated from total quantity and total value data provided by U.S. producers and importers. The precision and variation of these figures may be affected by rounding, limited quantities, and producer or importer estimates.

[21] Petitioners also noted a number of inconsistencies in the importer questionnaires that may have implied errors in the pricing data. These inconsistencies have been addressed to the extent possible, and corrections have been made.

[22] The reduction in Indonesian pricing coverage from the prehearing report is mainly the result of the ***.

[23] Hearing transcript, p. 75 (Hudgens). Specifically, petitioners questioned the values reported by ***.

Table V-6
PET resin: Weighted-average f.o.b. prices and quantities of domestic and imported product 4 and margins of underselling/(overselling), by quarters, January 2015-March 2018

* * * * * * *

Figure V-2
PET resin: Weighted-average prices and quantities of domestic and imported product 1, by quarters, January 2015-March 2018

* * * * * * *

Figure V-3
PET resin: Weighted-average prices and quantities of domestic and imported product 2, by quarters, January 2015-March 2018

* * * * * * *

Figure V-4
PET resin: Weighted-average prices and quantities of domestic and imported product 3, by quarters, January 2015-March 2018

* * * * * * *

Figure V-5
PET resin: Weighted-average prices and quantities of domestic and imported product 4, by quarters, January 2015-March 2018

* * * * * * *

Import purchase costs

In addition to price data, the Commission requested that importers provide landed, duty-paid values and quantities for imports used for internal consumption (direct imports).[24] Two importers, ***, provided such data for product 1,[25] and one importer (***) provided data for product 3.[26] Their purchase cost data for imports of products 1 and 3 are presented in tables V-7 and V-8 and figures V-6 and V-7 along with U.S. sales prices to end users (previously presented).

Table V-7
PET resin: Purchase costs. Weighted-average f.o.b. prices of domestic product 1 and landed duty-paid values and quantities of imported product 1, by quarter, January 2015-March 2018

* * * * * * *

[24] ***.
[25] In addition, ***.
[26] ***.

Table V-8
PET resin: Purchase costs. Weighted-average f.o.b. prices of domestic product 3 and landed duty-paid values and quantities of imported product 3, by quarter, January 2015-March 2018

* * * * * * *

Figure V-6
PET resin: Weighted-average prices and quantities of domestic and LDP value and quantity of imported product 1, by quarters, January 2015-March 2018

* * * * * * *

Figure V-7
PET resin: Weighted-average prices and quantities of domestic and LDP value and quantity of imported product 3, by quarters, January 2015-March 2018

* * * * * * *

These importers were asked to identify the benefits of importing PET resin directly as opposed to purchasing it from a U.S. producer or importer. One importer, ***, reported a number of reasons that it preferred to import PET resin, including: 1) domestic PET resin producers' inability or unwillingness to package PET resin in big bags; 2) U.S. producers do not offer physical hedging options that are provided by foreign firms (in a rising PET resin market, the value of hedging options could be millions of dollars); 3) in the Pacific Northwest, West, and Southwest the nearest domestic PET resin producers are distant, increasing delivery costs; 4) the rail transportation purchasing power of domestic PET resin producers is limited; and 5) vertically integrated offshore PET resin producers have larger scale and more technologically advanced production lines reducing their costs.[27]

None of the importers estimated the savings from importing themselves rather than purchasing. ***.

Price and import purchase cost trends

In general, prices increased during January 2015-March 2018. For product 1, prices tended to decrease from the beginning of 2015 to the second or third quarters of 2016, but then increased in 2017 and 2018. Product 2 prices were generally lower in 2016, but increased over the whole period, although much of this increase for the U.S. product occurred only in 2018. The U.S. price of product 3 tended to be lower in 2016 and 2017 than in 2015 but in the first quarter of 2018, the price increased to the level reported in the first quarter of 2015. For imports from Pakistan and Taiwan, prices tended to be lowest in 2016, increasing through 2017, and reaching their highest levels in the first quarter of 2018. The U.S. price of product 4 fluctuated over the period, with prices in 2016 typically lower than in other years, and the price in the first quarter of 2018 matching the high price achieved in the second quarter of 2015.

[27] ***.

Prices of imported product 4 from Brazil and Taiwan also were lowest in the second quarter of 2016 and were highest in the first quarter of 2018.

Table V-9 summarizes the price and purchase cost trends, by country and by product. As shown in the table, domestic price increases ranged from *** percent to *** percent during January 2015-March 2018, while import price increases ranged from *** percent to *** percent between the first or second quarters of 2015 and the first quarter of 2018. There was one instance in which the price of imported product declined between the first quarter of 2015 and the first quarter of 2018, decreasing by *** percent (product 1 from Pakistan).

Table V-9
PET resin: Summary of weighted-average f.o.b. prices for products 1-4 from the United States and subject countries

* * * * * * *

Price comparisons

As shown in table V-10, prices for products imported from subject countries were below those for U.S.-produced product in 50 of 156 instances (394,000 pounds); margins of underselling ranged from 0.0 to 22.5 percent. In the remaining 106 instances (895,000 pounds), margins of overselling for products from subject countries were between 0.1 and 49.9 percent above prices for the domestic product. On an individual subject country basis, there were more instances (and higher quantities) of overselling than underselling. On a pricing product basis, the volume and number of instances of overselling were higher than of underselling for all pricing products except product 3.[28]

[28] Instances of product 3 underselling were partially a result of Pakistan underselling U.S. product on comparatively low volumes in *** out of 21 quarters.

Table V-10
PET resin: Instances of underselling/(overselling) and the range and average of margins, by country, January 2015-March 2018

Source	Underselling				
	Number of quarters	Quantity[1] (pounds)	Average margin (percent)	Margin range (percent)	
				Min	Max
Product 1	10	***	5.1	0.4	9.7
Product 2	9	***	3.3	0.0	8.5
Product 3	21	***	7.2	0.2	22.5
Product 4	10	***	5.9	1.2	18.7
Total, underselling	50	394,353	5.8	0.0	22.5
Brazil	10	***	8.4	0.0	22.5
Indonesia	3	***	5.6	0.6	9.0
Korea	4	***	4.1	0.4	8.5
Pakistan	12	***	7.8	1.1	16.3
Taiwan	21	***	3.8	0.2	9.7
Total, underselling	50	394,353	5.8	0.0	22.5
Source	**(Overselling)**				
	Number of quarters	Quantity[1] (pounds)	Average margin (percent)	Margin range (percent)	
				Min	Max
Product 1	38	***	(7.7)	(0.1)	(26.7)
Product 2	47	***	(9.5)	(0.2)	(46.9)
Product 3	8	***	(7.0)	(0.9)	(17.0)
Product 4	13	***	(5.0)	(0.2)	(17.6)
Total, overselling	106	895,004	(8.1)	(0.1)	(46.9)
Brazil	26	***	(8.0)	(0.1)	(35.3)
Indonesia	11	***	(10.8)	(0.6)	(46.9)
Korea	19	***	(7.3)	(0.2)	(22.5)
Pakistan	21	***	(10.3)	(1.0)	(29.2)
Taiwan	29	***	(6.2)	(0.2)	(23.7)
Total, overselling	106	895,004	(8.1)	(0.1)	(46.9)

[1] These data include only quarters in which there is a comparison between the U.S. and subject product.

Source: Compiled from data submitted in response to Commission questionnaires.

LOST SALES AND LOST REVENUE

In the preliminary phase of the investigations, the Commission requested that U.S. producers of PET resin report purchasers where they experienced instances of lost sales or revenue due to competition from imports of PET resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan since January 1, 2014. *** U.S. producers submitted lost sales allegations. The *** responding U.S. producers identified 25 firms where they lost sales; no producers provided lost revenue allegations. Lost sales allegations were against all subject countries. All allegations were with respect to spot sales between January 2014 and June 2017.

In the final phase of the investigations, all four responding U.S. producers reported that they had reduced prices and rolled back announced price increases, and all four firms reported that they had lost sales. Staff contacted 37 purchasers and received responses from 25 purchasers. Responding purchasers reported purchasing more than *** pounds of PET resin during 2015-17 (table V-11).

Table V-11
PET resin: Purchasers' responses to purchasing patterns

* * * * * * *

Of the 25 responding purchasers, 19 reported that, since 2015, they had purchased imported PET resin from subject countries instead of U.S.-produced product (9 for Brazil, 3 for Indonesia, 5 for Korea, 7 for Pakistan, and 10 for Taiwan). Eleven of these 25 purchasers reported that subject import prices were lower than those for U.S.-produced product (5 for Brazil, 1 for Indonesia, 2 for Korea, 5 for Pakistan, and 4 for Taiwan). Four of these purchasers reported that price was a primary reason for the decision to purchase imported product rather than U.S.-produced product (1 for Brazil, 0 for Indonesia, 1 for Korea, 0 for Pakistan, and 3 for Taiwan). Four purchasers estimated the quantity of PET resin from subject countries that they had purchased instead of domestic product due to lower subject import prices; quantities ranged from 4,000 pounds to 96 million pounds (tables V-12 and V-13). In addition, purchasers identified a number of non-price reasons for purchasing imported PET resin rather than U.S.-produced product. Eleven purchasers reported availability or supply security as primary reasons for purchasing imports; other reasons for purchasing imports include product trials, diversification of supply, specialty products, and PCR (post-consumer recycled) content.

Table V-12
PET resin: Purchasers' responses to purchasing subject imports instead of domestic product January 2015-March 2018

* * * * * * *

Table V-13
PET resin: Purchasers' responses to purchasing subject imports instead of domestic product, by country, January 2015-March 2018

Source	Count of purchasers reporting purchasing subject instead of domestic product	Count of purchasers reporting that imports were priced lower	Count of purchasers reporting that price was a primary reason for shift	Quantity subject purchased (1,000 pounds)[1]
Brazil	9	5	1	***
Indonesia	3	1	---	---
Korea	5	2	1	***
Pakistan	7	5	---	---
Taiwan	10	4	4	***
Any subject source	19	11	5	***

[1] This excludes the value of ***.

Source: Compiled from data submitted in response to Commission questionnaires.

Of the 25 responding purchasers, two reported that U.S. producers had reduced prices in order to compete with lower priced imports from subject countries, and three reported that U.S. producers had not reduced prices in order to compete with subject imports (table V-14; 20 reported that they did not know). The reported estimated price reductions ranged from *** to *** percent.[29] In describing the price reductions, purchaser *** cited imports from Brazil as causing prices to be lower beginning in January 2016. Responses by country are provided in table V-15.

Table V-14
PET resin: Purchasers' responses to U.S. producer price reductions, January 2015-March 2018

* * * * * * *

Table V-15
PET resin: Purchasers' responses to the question if U.S. producers reduced prices due to competition from subject imports, by country, January 2015-March 2018

Source	Yes	No	Do not know
Brazil	2	9	14
Indonesia	1	5	20
Korea	1	8	17
Pakistan	1	10	13
Taiwan	1	8	15
Reported response for any subject source	2	14	21

Source: Compiled from data submitted in response to Commission questionnaires.

[29] ***.

Purchasers provided a number of additional comments about the PET resin industry. *** reported that Nan Ya, DAK, and Indorama eliminate imports to create shortages, which increase prices. *** reported reduced availability of PET resin and increased margins for resin producers. *** reported that domestically produced product was unavailable, and necessitated seeking alternative sources. *** reported that payment terms are a significant factor, and that cash deposits need to be accounted for in comparing purchase prices. *** reported that with the anticipated opening of the M&G Corpus Christi plant originally scheduled for early 2016, PET resin suppliers began competing on lower prices. *** also stated that U.S. producers buy raw materials from parent companies at inflated prices, which allows parent companies to retain larger profits outside the United States, and makes U.S. PET resin producers appear to be less profitable.

PART VI: FINANCIAL EXPERIENCE OF U.S. PRODUCERS

BACKGROUND

Four U.S. producers (DAK, Indorama, M&G, and Nan Ya) provided financial data on their operations of PET resin.[1] These data account for all known U.S. production of PET resin from January 2015 to March 2018. No firm reported sales other than commercial sales, and all firms reported a calendar year end of December 31. All three producers operating at the end of 2017 *** reported purchasing inputs from related parties.[2] [3] ***.[4] All four producers reported sales of out-of-scope merchandise in the same facilities as PET resin, with PET resin making up the largest share of all products sold in 2017.[5]

OPERATIONS ON PET RESIN

Table VI-1 presents aggregated data on U.S. producers' operations in relation to PET resin from January 2015 to March 2018; table VI-2 presents the change in average unit values for the data presented in table VI-1 between yearly periods; table VI-3 presents selected company-specific financial data; and table VI-4 presents company-specific raw material inputs in 2017. In general, the trends for gross and operating income were similar during the period examined, with improvement from 2015 to 2016, followed by a decline from 2016 to 2017. Gross and operating income were higher in January-March 2018 than in January-March 2017. All five periods show *** and all periods except January-March 2017 show ***, while *** occurred in three out of five periods examined.

---

[1] As discussed previously in Part III, M&G was sold to Far Eastern Investment Holding, Ltd. ("Far Eastern") on January 30, 2018 and is ***. M&G filed for Chapter 11 bankruptcy protection on October 24, 2017 and October 30, 2017 (on October 17, 2017, M&G's parent company filed an application for bankruptcy protection under Italian law). Far Eastern reported starting PET resin production at the former M&G facility in Apple Grove, West Virginia, on July 11, 2018, with the first sale of PET resin recorded in its books and records on July 23, 2018. *Prime Clerk Webpage*, https://cases.primeclerk.com/mgusa; *M&G Webpage,* http://www.mg-chemicals.com/en/restructuring; *Gruppo MG Webpage*, http://www.gruppomg.com/en/news/26, retrieved August 15, 2018; ***, email message to USITC auditor, August 20, 2018; and, ***, email to USITC auditor, August 29, 2018.

[2] ***. U.S. producer questionnaires, III-7; ***, email messages to USITC auditor, August 9-10, 2018; and, ***, email message to USITC auditor, August 16, 2018.

[3] The Commission's current practice requires that relevant cost information associated with input purchases from related suppliers correspond to the manner in which this information is reported in the U.S. producer's own accounting books and records.

[4] ***, email message to USITC auditor, August 17, 2018.

[5] PET resin accounted for *** percent of products sold at the same facility in 2017 for ***, 73 percent for ***, *** percent for ***, and *** percent for ***. In addition to PET resin, *** reported selling one other product in 2017: ***. *** reported selling three other products in 2017: ***. U.S. producer questionnaires, III-5.

Table VI-1

PET resin: Results of operations of U.S. producers, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

Table VI-2

PET resin: Changes in AUVs, between calendar years and between partial year periods

* * * * * * *

Table VI-3

PET resin: Select results of operations of U.S. producers, by company, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

Table VI-4

PET resin: U.S. producers' raw material inputs, by firm, 2017

* * * * * * *

Net sales

As presented in tables VI-1 and VI-3, the reported aggregate net sales quantity increased by *** percent, while the aggregate net sales value declined by *** percent from 2015 to 2017. Reported aggregate net sales quantity and value were both higher in January-March 2018 than in January-March 2017. All producers except *** reported increased net sales quantity in every period, with *** experiencing the largest increase in net sales quantity from 2015 to 2017 (*** percent); *** reported net sales quantity increases of *** and *** percent, respectively. ***'s net sales quantity declined by *** percent from 2015 to 2017; the firm *** in January-March ("interim") 2018.[6] Comparable interim net sales quantity for *** U.S. producers were higher in January-March 2018 than in January-March 2017.

Net sales values indicated a different trend, with three U.S. producers (***) reporting declines from 2015 to 2017. *** reported the highest revenue loss at ***, a loss of *** percent from 2015 to 2017. ***'s revenue loss was the highest in percentage terms at *** percent, a loss of *** from 2015 to 2017. *** was the only U.S. producer to report increases in net sales value in every period, with revenues increasing by ***, an increase of *** percent, from 2015 to 2017.[7] Similar to net sales quantity, net sales values were higher in January-March 2018 than in January-March 2017 for the three U.S. producers still in operation.

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[6] ***. ***, email message to USITC auditor, August 17, 2018.

[7] ***, email message to USITC auditor, August 16, 2018.

On a per-pound basis, the net sales value declined by $*** from 2015 to 2017 for the industry, with the average sales price ranging from $*** in 2016 to $*** in 2015 per-pound. Individually, *** reported the highest average sales price per pound during 2015-17 with sales prices averaging $*** in 2016 to $*** in 2015. The lowest average sales price per pound was reported by *** at $*** and $***, respectively, in 2016. [8] Average sales price per pound was higher in January-March 2018 than in January-March 2017.

Cost of goods sold ("COGS") and gross profit or (loss)

As presented in tables VI-1 and VI-3, raw material costs represented the largest component of COGS, accounting for *** to *** percent of total COGS from 2015 to 2017 and were higher in January-March 2018 than in January-March 2017. On a per-pound basis, raw material costs declined by $*** from 2015 to 2017 but were higher in January-March 2018 than in January-March 2017. Table VI-4 shows that PTA accounted for *** percent of total reported 2017 raw material costs, MEG accounted for *** percent of total reported 2017 raw material costs, and all other raw materials accounted for *** percent of total reported 2017 raw material costs. Firm-by-firm analysis indicates that producers generally paid similar per-pound prices for PTA and MEG, with PTA prices ranging from $*** to $*** and MEG prices ranging from $*** to $*** in 2017.[9] [10] Other raw materials reported were purified isophthalic acid (PIA or IPA), diethylene glycol (DEG), cyclohexanedimethanol (CHDM), catalysts (antimony triacetate cobalt), pigments, and energy.[11]

Other factory costs were the second largest component of COGS, accounting for *** to *** percent of total COGS from 2015 to 2017.[12] Direct labor costs accounted for *** to *** percent of total COGS during this period.[13] As presented in tables VI-1 and VI-3, the aggregate COGS declined by *** percent from 2015 to 2017 but were higher in January-March 2018 than in January-March 2017. As a ratio to net sales, other factory costs remained relatively stable from 2015 to 2017, and were lower in January-March 2018 than in January-March 2017.

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[8] U.S. producers stated that the fluctuations in PET resin prices were the result of subject import pricing, with raw material price fluctuations covered under the contract or via formula pricing with customers. ***, email message to USITC auditor, September 20, 2018; ***, email message to USITC auditor, September 21, 2018; and Petitioners' posthearing brief, exh. 1, p. 18-20.

[9] One producer, ***, stated that ***. ***, email message to USITC auditor, August 16, 2018.

[10] ***. *** was the only U.S. producer who sourced most of the PTA used for PET resin from *** as well as purchasing PTA from ***. *** producer sourced raw materials ***. U.S. producers' questionnaires, III-9b; ***, email message to USITC auditor, August 10, 2018; and, ***, email message to USITC auditor, August 16, 2018.

[11] Ibid.

[12] One firm, ***, reported large fluctuations in other factory costs from 2015 to 2017 and also in interim periods. ***. It is the only U.S. producer that reported ***. ***'s U.S. producer questionnaire, III-10 and III-11.

[13] ***'s U.S. producer questionnaire, III-4 and III-7; and ***, email message to USITC auditor, September 21, 2018.

As a ratio to net sales, raw materials and overall COGS were relatively steady from 2015 to 2017, with raw materials decreasing by *** percentage points and average COGS increasing by *** percentage points. Both raw materials and overall COGS as a ratio to net sales were lower in January-March 2018 than in January-March 2017. On a per-pound basis, COGS decreased by *** percent from 2015 to 2017, but were higher in January-March 2018 than in January-March 2017.

Producers' aggregate gross profit increased from $*** in 2015 to $*** in 2016, before decreasing to $*** in 2017 (an overall decrease of *** percent from 2015 to 2017). Aggregate gross profit was higher in January-March 2018 than in January-March 2017. *** reported the largest decrease in gross profit ($***, or negative *** percent) from 2015 to 2017.[14] As measured by percent change, *** reported the greatest change, with a gross loss of $***, or a negative *** percent from 2015 to 2017 ($*** million gross loss in 2015 to $*** million gross loss in 2017).[15] ***.[16]

Selling general and administrative ("SG&A") expenses and operating income or (loss)

As shown in table VI-1, SG&A expenses decreased by *** percent from 2015 to 2017 and were lower in January-March 2018 than January-March 2017.[17] The industry's SG&A expense ratio (i.e., total SG&A expenses divided by total revenue) ranged from *** to *** percent from 2015 and 2017, and was lower in January-March 2018 than in January-March 2017.

Collectively, U.S. producers reported an increase in operating margins from 2015 to 2016 and a decrease to a period low in 2017 of *** percent. Operating margins were higher in January-March 2018 than January-March 2017. Individually, U.S. producers' operating margins showed varying trends from 2015 to 2017, with *** experiencing declines, while *** experiencing fluctuations. *** reported operating losses and had somewhat different trends throughout the reporting period, with 2016 operating losses being the lowest during the period examined. In contrast, ***. These cost differences among U.S producers may partially reflect underlying differences in product mix between PET resin and out-of-scope merchandise sales; with the lower per-unit COGS reported by two producers (*** and ***) that sold larger percentages of out-of-scope products produced at the same facility (*** percent and *** percent, respectively) while out-of-scope merchandise sales made up a lower percentage (*** percent) of total sales for the two producers that reported higher per-unit COGS (***, respectively) in 2017. Additional distinctions among producers' costs may reflect difference in cost methodologies and relative sizes of their PET resin operations. ***.[18] The largest producer

[14] ***. ***, email message to USITC auditor, August 10, 2018.

[15] *** in 2016, however. The gross profit in 2016 for *** is attributable to a decrease in raw material cost of $*** per pound from 2015 while direct labor costs stayed the same and other factory costs increased slightly (by $*** per pound).

[16] ***'s U.S. producer questionnaire, II-2a.

[17] ***. ***'s U.S. producer questionnaire, III-10 and III-11.

[18] Ibid.

*** incurred higher fixed costs with *** in the United States while the smallest producer *** has *** PET resin facility.[19]

On a per-pound basis, total operating costs and expenses declined by about $*** from 2015 to 2017 and were higher in January-March 2018 than in January-March 2017. All three producers operating in 2018 reported higher operating margins in January-March 2018 than January-March 2017. Unlike the industry's gross profitability, the industry's aggregate operating income fluctuated, from $*** in 2015 to $*** in 2016, then to $*** in 2017. Aggregate operating income was higher in January-March 2018 than in January-March 2017.

Other expenses

Other expenses, including interest expenses and all other expenses, decreased from 2015 to 2016 and then increased dramatically from 2016 to 2017. Other expenses were lower in January-March 2018 than in January-March 2017. *** reported an unusually high level of nonrecurring other expenses ($***), an increase of more than *** percent from 2015 and 2016.[20] ***'s remaining other expenses were interest costs with its vendors.[21] ***'s other expenses declined from 2015 to 2016 and were lower in January-March 2018 than in January-March 2017.[22] *** reported high other expenses throughout 2015 to 2017.[23]

Net income or (loss)

U.S. producers reported a net loss of $*** in 2015, a net income of $*** in 2016, and a net loss of $*** in 2017. Net income was higher in January-March 2018 than in January-March 2017. The large increase in net loss of over *** percent from 2015 to 2017 was driven by ***'s operating loss in 2017, compounded by its $*** nonrecurring impairment expense in 2017, as well as the poor financial performance of *** in every period examined. *** reported higher net income in January-March 2018 than in January-March 2017. Unlike ***, *** reported increasing net income each year and in the interim periods, with an increase of more than *** percent from 2015 to 2017 and higher net income in January-March 2018 than in January-March 2017. *** also experienced net gains across ***, but reported a lower net income in 2016 relative to 2015 and 2017; ***'s net income was higher in January-March 2018 than in January-March 2017. Net income as a ratio to net sales and per-pound net income reflected the same trend as actual net income and losses, with negative performances in 2015, 2017, and January-March 2017.

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[19] ***. ***'s U.S. producer questionnaire, I-2, III-3 to III-5, and ***, email messages to USITC auditor, September 20, 2018.

[20] ***. ***, email messages to USITC auditor, August 10, 20, and 22, 2018 and September 20, 2018.

[21] ***. ***, email messages to USITC auditor, August 10 and August 20, 2018.

[22] ***. ***'s U.S. producer questionnaire, III-10 and III-11, and ***, email messages to USITC Auditor, July 30, 2018 and August 9, 2018.

[23] ***. ***, email message to USITC auditor, August 17, 2018.

VARIANCE ANALYSIS

A variance analysis is not presented in this report due to ***. The discussion of COGS, gross profit/loss, SG&A expenses, and operating income, as shown in tables VI-1 and VI-3, mirrors the results of a variance analysis in these investigations. That is, the decline in net income from 2015 to 2017 reflects a price decline combined with increases in average operating costs and expenses.

CAPITAL EXPENDITURES AND RESEARCH AND DEVELOPMENT ("R&D") EXPENSES

Table VI-5 presents capital expenditures and R&D expenses by firm. Aggregate capital expenditures and R&D irregularly decreased from 2015 to 2017. Additionally, capital expenditures were lower in January-March 2018 than in January-March 2017 while R&D expenses were higher in January-March 2018 than in January-March 2017. The majority of reported capital expenditures reflect the data of ***.[24] ***.[25] As with capital expenditures, *** accounted for the vast majority of total U.S. producers' R&D expenses. *** and ***.[26] ***.[27] ***.[28]

Table VI-5
PET resin: Capital expenditures and R&D expenses for U.S. producers, by firm, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

ASSETS AND RETURN ON ASSETS ("ROA")

Table VI-6 presents data on the U.S. producers' total assets and ROA for PET resin.[29] The total assets utilized in the production, warehousing, and sale of PET resin increased from $*** in 2015 to $*** in 2016 and 2017. The ROA increased from *** percent in 2015 to *** percent in 2016 before decreasing to *** percent in 2017.[30]

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[24] ***. ***'s U.S. producer questionnaire, question III-13. ***, email messages to USITC auditor, September 20, 2018.

[25] ***'s U.S. producer questionnaire, question III-13.

[26] *** and ***'s U.S. producer questionnaire, question III-13.

[27] ***, email message to USITC auditor, August 17, 2018.

[28] ***, email message to USITC auditor, August 16, 2018.

[29] The ROA is calculated as operating income divided by total assets. With respect to a firm's overall operations, the total asset value reflects an aggregation of a number of assets which are generally not product specific. Thus, high-level allocations may have been required in order to report a total asset value for PET resin.

[30] ***. ***, email message to USITC auditor, August 17, 2018.

Table VI-6

PET resin: Value of assets used in production, warehousing, and sales, and ROA for U.S. producers by firm, by firm, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

CAPITAL AND INVESTMENT

The Commission requested U.S. producers of PET resin to describe any actual or potential negative effects of imports of PET resin from the subject countries on their firms' growth, investment, ability to raise capital, development and production efforts, or the scale of capital investments. Table VI-7 tabulates the responses of the four responding U.S. producers and table VI-8 presents the detailed narrative responses of U.S. producers regarding actual and anticipated negative effects of subject imports.

Table VI-7

PET resin: Actual and anticipated negative effects of imports on investment and growth and development

Item	No	Yes
Negative effects on investment	0	4
Cancellation, postponement, or rejection of expansion projects		2
Denial or rejection of investment proposal		0
Reduction in the size of capital investments		0
Return on specific investments negatively impacted		0
Other		4
Negative effects on growth and development	0	4
Rejection of bank loans		0
Lowering of credit rating		0
Problem related to the issue of stocks or bonds		0
Ability to service debt		0
Other		4
Anticipated negative effects of imports	0	4

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-8

PET resin: Narratives relating to actual and anticipated negative effects of imports on investment and growth and development, since January 1, 2015

* * * * * * *

PART VII: THREAT CONSIDERATIONS AND INFORMATION ON NONSUBJECT COUNTRIES

Section 771(7)(F)(i) of the Act (19 U.S.C. § 1677(7)(F)(i)) provides that—

> *In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the subject merchandise, the Commission shall consider, among other relevant economic factors*[1]*--*
>
> *(I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement), and whether imports of the subject merchandise are likely to increase,*
>
> *(II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,*
>
> *(III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,*
>
> *(IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices, and are likely to increase demand for further imports,*
>
> *(V) inventories of the subject merchandise,*

[1] Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that "The Commission shall consider {these factors} . . . as a whole in making a determination of whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted under this title. The presence or absence of any factor which the Commission is required to consider . . . shall not necessarily give decisive guidance with respect to the determination. Such a determination may not be made on the basis of mere conjecture or supposition."

(VI) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products,

(VII) in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both),

(VIII) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).[2]

Information on the volume and pricing of imports of the subject merchandise is presented in Parts IV and V; and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in Part VI. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product-shifting;" any other threat indicators, if applicable; and any dumping in third-country markets, follows. Also presented in this section of the report is information obtained for consideration by the Commission on nonsubject countries.

THE INDUSTRY IN BRAZIL

The Commission issued foreign producers'/exporters' questionnaires to four firms identified as possible producers and/or exporters of PET resin from Brazil.[3] Usable responses to

[2] Section 771(7)(F)(iii) of the Act (19 U.S.C. § 1677(7)(F)(iii)) further provides that, in antidumping investigations, ". . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other WTO member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

[3] These firms were identified through a review of information submitted in the petitions and contained in *** records. Commission staff was unable to obtain valid contact information for a fifth

the Commission's questionnaire were received from two firms:[4] M&G Polímeros Brazil S/A ("M&G Brazil")[5] and Companhia Integrada Textil de Pernambuco ("Citepe").[6] These firms' exports to the United States accounted for *** U.S. imports of PET resin from Brazil in 2017. According to estimates provided by the responding Brazilian producers, these firms accounted for essentially all known production of PET resin in Brazil. Table VII-1 presents information on the PET resin operations of the responding producers in Brazil.

Table VII-1
PET resin: Summary data for producers in Brazil, 2017

* * * * * * *

Changes in operations

Changes in PET resin operations since January 1, 2015, as reported by Brazilian producers in their questionnaire responses are presented in table VII-2.

Table VII-2
PET resin: Brazilian producers' reported changes in operations, since January 1, 2015

* * * * * * *

Citepe reported that it ***. However, reports indicate that Citepe's Brazilian facility was acquired by the parent company of U.S. producer DAK in May 2018.[7] M&G Brazil, which was acquired in May 2018 by Indorama Ventures (parent company of U.S. and Indonesian PET resin producers), reported that *** following the acquisition.[8]

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firm (Terphane Ltda.) identified in the petitions. According to *** records, Terphane Ltda. accounted for *** percent of total exports of PET resin from Brazil during 2017.

[4] The two other firms that did not respond to the Commission's questionnaire (Braskem and PetroquímicaSuape) were not named as exporters of PET resin from Brazil in *** records.

[5] M&G Brazil reported that PET resin represented *** percent of its total sales in its most recent fiscal year.

[6] Citepe reported that PET resin represented *** percent of its total sales in its most recent fiscal year.

[7] "Closing of Sale of PetroquímicaSuape and Citepe," Petrobras website, press release, April 30, 2018, http://www.investidorpetrobras.com.br/en/press-releases/closing-sale-petroquimicasuape-and-citepe, retrieved August 8, 2018.

[8] "Thai Indorama completes acquisition of Brazil PET plant," *ICIS*, May 25, 2018, https://www.icis.com/resources/news/2018/05/25/10225107/thai-indorama-completes-acquisition-of-brazil-pet-plant/, retrieved August 14, 2018.

Operations on PET resin

Table VII-3 presents information on the PET resin operations of the two responding producers in Brazil. Brazilian producers' capacity increased by *** percent, from *** pounds in 2015 to *** pounds in 2016, reflecting ***. Capacity in Brazil remained unchanged thereafter and projections for 2018 and 2019 indicate that no changes in capacity are expected. Production increased overall by *** percent, from *** pounds in 2015 to *** pounds in 2017, but was *** percent lower in January-March 2018 than in the comparable period in 2017. An increase of *** percent over 2017 production levels is projected for 2019. Capacity utilization decreased by *** percentage points from 2015 to 2017, and was *** percentage points lower in the first quarter of 2018 than in the first quarter of 2017. Capacity utilization is projected to increase by *** percentage points from full year 2017 to full year 2018.

Table VII-3
PET resin: Data on Industry in Brazil, 2015-17, January to March 2017, January to March 2018, and projected calendar years 2018 and 2019

* * * * * * *

A substantial majority of Brazilian producers' total shipments of PET resin are to the commercial home market (*** percent of total shipments in 2015, *** percent in 2016, *** percent in 2017, and *** percent during the first quarter of 2018). Exports accounted for a relatively smaller, but increasing, share of Brazilian producers' total shipments during 2015-17. In 2015, Brazilian producers' exports accounted for *** percent of their total shipments. By 2017, exports accounted for *** percent of total shipments. However, by the first quarter of 2018, exports accounted for *** percent of total shipments. The Brazilian producers did not report any internal consumption/transfers of PET resin.

In 2015 and 2016, the majority of Brazilian exports were destined for the United States; however, there were no exports of PET resin to the United States from Brazil during the first quarter of 2018 and there are no projected exports to the United States during calendar years 2018 and 2019. In fact, Citepe specifically noted in its questionnaire response that "***." Export shipments to the United States increased by *** percent from *** pounds in 2015 to *** pounds in 2016, before declining to *** pounds in 2017.

The principal other export markets for ***. The principal other export markets for ***. These other exports, which accounted for *** percent of total shipments in 2017 and *** percent of total shipments during the first quarter of 2018, are expected to account for *** of the total shipments by calendar year 2019.

Alternative products

Responding Brazilian firms ***.

Exports

According to Global Trade Atlas ("GTA"), the leading export markets for PET from Brazil are the United States, Colombia, and Venezuela (table VII-4). During 2017, the United States was the top export market for PET from Brazil, accounting for 69.6 percent of total exports, followed by Colombia and Venezuela, accounting for 13.5 percent and 6.4 percent, respectively.

Table VII-4
PET: Exports from Brazil, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Quantity (1,000 pounds)		
Exports from Brazil to the United States	65,346	299,010	277,262
Exports from Brazil to other major destination markets.--			
Colombia	36,350	27,427	53,816
Venezuela	43,934	52,899	25,701
Paraguay	97	6,038	12,849
Mexico	16,949	7	12,198
Argentina	33,255	10,587	11,786
Uruguay	291	69	4,418
Australia	---	---	467
Spain	1,310	3	40
All other destination markets	3,920	2,504	45
Total exports from Brazil	201,450	398,546	398,581
	Value (1,000 dollars)		
Exports from Brazil to the United States	29,200	137,602	142,803
Exports from Brazil to other major destination markets.--			
Colombia	17,061	11,102	25,601
Venezuela	28,315	30,410	14,037
Paraguay	42	2,484	6,097
Mexico	9,462	8	7,536
Argentina	18,159	4,743	6,030
Uruguay	110	26	2,015
Australia	---	---	250
Spain	364	19	25
All other destination markets	1,767	978	162
Total exports from Brazil	104,480	187,372	204,556

Table continued on next page.

Table VII-4—Continued
PET: Exports from Brazil, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Unit value (dollars per pound)		
Exports from Brazil to the United States	0.45	0.46	0.52
Exports from Brazil to other major destination markets.--			
Colombia	0.47	0.40	0.48
Venezuela	0.64	0.57	0.55
Paraguay	0.44	0.41	0.47
Mexico	0.56	1.15	0.62
Argentina	0.55	0.45	0.51
Uruguay	0.38	0.38	0.46
Australia	---	---	0.53
Spain	0.28	5.78	0.64
All other destination markets	0.45	0.39	3.65
Total exports from Brazil	0.52	0.47	0.51
	Share of quantity (percent)		
Exports from Brazil to the United States	32.4	75.0	69.6
Exports from Brazil to other major destination markets.--			
Colombia	18.0	6.9	13.5
Venezuela	21.8	13.3	6.4
Paraguay	0.0	1.5	3.2
Mexico	8.4	0.0	3.1
Argentina	16.5	2.7	3.0
Uruguay	0.1	0.0	1.1
Australia	---	---	0.1
Spain	0.7	0.0	0.0
All other destination markets	1.9	0.6	0.0
Total exports from Brazil	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Note.--Data presented may also include some volume of out-of-scope merchandise, such as PETG, PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram, and PET resin that contains more than 50 percent recycled product by weight.

Source: Official exports statistics under HS subheading 3907.60, 3907.61, and 3907.69 as reported by SECEX – Foreign Trade Secretariat in the Global Trade Atlas database, retrieved July 10, 2018.

THE INDUSTRY IN INDONESIA

The Commission issued foreign producers'/exporters' questionnaires to four firms identified as possible producers and/or exporters of PET resin from Indonesia.[9] Usable responses to the Commission's questionnaire were received from three producers:[10] PT Indorama Polypet Indonesia ("Indorama Polypet");[11] PT Indo-Rama Synthetics Tbk. ("Indorama Synthetics");[12] and Indorama Ventures Indonesia, PT ("Indorama Ventures").[13] *** reported exports of PET resin to the United States during the period examined in these investigations. *** exports to the United States accounted for *** U.S. imports of in-scope PET resin from Indonesia in 2017. According to estimates provided by the responding Indonesian producers, these firms accounted for virtually all known production of in-scope PET resin in Indonesia. Table VII-5 presents information on the PET resin operations of the responding producers in Indonesia.

Table VII-5
PET resin: Summary data for producers in Indonesia, 2017

Firm	Production (1,000 pounds)	Share of reported production (percent)	Exports to the United States (1,000 pounds)	Share of reported exports to the United States (percent)	Total shipments (1,000 pounds)	Share of firm's total shipments exported to the United States (percent)
Indorama Polypet	***	***	***	***	***	***
Indorama Synthetics	***	***	***	***	***	***
Indorama Ventures	***	***	***	***	***	***
Total	571,919	100.0	***	100.0	589,390	***

Source: Compiled from data submitted in response to Commission questionnaires.

[9] These firms were identified through a review of information submitted in the petitions and contained in *** records. Commission staff was unable to obtain valid contact information for three additional firms (MCN Polyurethane Indonesia, PT Mitsui Indonesia, PT Petnesia Resindo) identified in the petitions. According to *** records, these three firms were not listed as exporters of PET resin from Indonesia.

[10] One firm that did not respond to the Commission's questionnaire (PT Harvestindo International) is believed to be a producer of out-of-scope recycled PET products.

[11] Indorama Polypet reported that PET resin represented *** percent of its firm's total sales in the most recent fiscal year.

[12] Indorama Synthetics reported that PET resin represented *** percent of its firm's total sales in the most recent fiscal year.

[13] Indorama Ventures reported that *** percent of its total sales in the most recent fiscal year were sales of PET resin.

The parent company of Indonesian PET resin producer Indorama Ventures acquired PET resin producer M&G Brazil in May 2018.[14] In addition, domestic PET resin producer Indorama is affiliated with the three responding Indonesian PET resin producers through common ownership.[15]

Changes in operations

The three responding Indonesian producers reported in their responses to the Commission's questionnaire that there were no operational and/or organizational changes in Indonesia since January 1, 2015. However, as previously noted, Indorama Ventures' parent company acquired PET resin producer M&G Brazil in May 2018.[16]

Operations on PET resin

Table VII-6 presents information on the PET resin operations of the responding producers in Indonesia.

The Indonesian producers' capacity to produce in-scope PET resin remained relatively unchanged throughout the period examined in these investigations, declining by 0.1 percent from 2015 to 2016 and increasing by 0.3 percent from 2016 to 2017. Capacity was 0.9 percent lower in January-March 2018 than in January-March 2017. Annual capacity in Indonesia is projected to return to levels similar to 2015 during 2018 and 2019. *** was the sole Indonesian producer responsible for these minor fluctuations in capacity from year to year, noting that such changes were due to the calculation of capacity based on "***." *** also reported that intense competition from other producers is a constraint that sets the limit on its capacity and *** reported that the capacity of its continuous polymerization machine sets the limit on its overall plant capacity.

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[14] "Thai Indorama completes acquisition of Brazil PET plant," *ICIS*, May 25, 2018, https://www.icis.com/resources/news/2018/05/25/10225107/thai-indorama-completes-acquisition-of-brazil-pet-plant/, retrieved August 14, 2018.

[15] "Organization Structure," Indorama Ventures company website, http://www.indoramaventures.com/en/our-company/organization-structure, retrieved September 24, 2018; and hearing transcript, p. 63 (Paramasivam). Commerce also noted in its final determinations that it found the following Indorama companies were affiliated: Indorama Synthetics, Indorama Ventures Alphapet Holdings, Inc.; Indorama Ventures; Indorama Polypet; and Indorama Polymers Public Company Ltd. (Polymers). *Polyethylene Terephthalate Resin From Indonesia: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Determination of Critical Circumstances, in Part*, 83 FR 48278, September 24, 2018.

[16] "Thai Indorama completes acquisition of Brazil PET plant," *ICIS*, May 25, 2018, https://www.icis.com/resources/news/2018/05/25/10225107/thai-indorama-completes-acquisition-of-brazil-pet-plant/, retrieved August 14, 2018.

Table VII-6
PET resin: Data on industry in Indonesia, 2015-17, January to March 2017, January to March 2018, and projected calendar years 2018 and 2019

Item	Actual experience					Projections	
	Calendar year			January to March		Calendar year	
	2015	2016	2017	2017	2018	2018	2019
	Quantity (1,000 pounds)						
Capacity	681,172	680,584	682,696	170,572	169,076	681,172	681,172
Production	558,209	591,753	571,919	142,544	146,731	584,956	591,517
End-of-period inventories	25,159	42,305	24,813	27,296	21,706	20,219	14,362
Shipments:							
Home market shipments:							
Internal consumption/ transfers	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***
Total home market shipments	***	***	***	***	***	***	***
Export shipments to:							
United States	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***
Total shipments	572,059	574,599	589,390	157,553	149,839	589,551	597,374
	Ratios and shares (percent)						
Capacity utilization	81.9	86.9	83.8	83.6	86.8	85.9	86.8
Inventories/production	4.5	7.1	4.3	4.8	3.7	3.5	2.4
Inventories/total shipments	4.4	7.4	4.2	4.3	3.6	3.4	2.4
Share of shipments:							
Home market shipments:							
Internal consumption/ Transfers	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***
Total home market Shipments	***	***	***	***	***	***	***
Export shipments to:							
United States	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***
Total shipments	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Production of PET resin in Indonesia increased by 6.0 percent, from 558.2 million pounds in 2015 to 591.8 million pounds in 2016, but declined by 3.4 percent to 571.9 million pounds in 2017. Production was 2.9 percent higher in the first quarter of 2018 than in the comparable period of 2017 and all three Indonesian producers reported that they expect production to increase in 2018-19 over the level reported for 2017. Capacity utilization fluctuated during the period examined, increasing by 5.0 percentage points, from 81.9 percent in 2015 to 86.9 percent in 2016, then declining by 3.1 percentage points to 83.8 percent in 2017. Capacity utilization was 3.2 percentage points lower at 86.8 percent in the first quarter of 2018 than in the first quarter of 2017, but is projected to increase from 83.8 percent in 2017 to 86.8 percent in 2019.

*** of Indonesian producers' total shipments of in-scope PET resin are export shipments, while the remainder are commercial home market shipments (*** percent in 2017). The Indonesian producers did not report any internal consumption/transfers of PET resin.

Indonesian producers' commercial home market shipments increased by *** percent from 2015 to 2017. ***. Commercial home market shipments were *** percent higher in January-March 2018 than in January-March 2017 and are projected to increase by 15.3 percent in 2019 over 2017 levels.

From 2015 to 2017, aggregate Indonesian producers' export shipments were largely destined for non-U.S. markets. Export shipments to non-U.S. markets accounted for *** percent to *** percent of total export shipments during 2015-17. In absolute terms, export shipments to non-U.S. markets declined by *** percent from *** pounds in 2015 to *** pounds 2017 and are projected to increase to *** pounds by 2019. The principal other export markets for ***; the principal other export markets for ***; and the principal other export markets for ***.

Indorama Synthetics was *** during the period examined in these investigations. Export shipments to the United States increased by *** percent from *** pounds in 2015 to *** pounds in 2017. However, by the first quarter of 2018, Indonesian producers reported that there were no exports of in-scope PET resin to the United States and projections indicate that the Indonesian producers do not plan to export PET resin to the United States during calendar years 2018 and 2019.

Alternative products

*** responding Indonesian firms (***) reported production of other products in their facilities that are used to produce in-scope PET resin (table VII-7). *** reported that other products it produces, which include "***" items, accounted for *** percent of its total plant production during 2017. It also indicated that it is not able to switch production between in-scope PET resin and these other "***" products using the same equipment and/or labor. *** reported that other products it produces on the same equipment and machinery used to produce in-scope PET resin include ***. It also reported that *** are factors that affect its ability to shift production among products. On an aggregate basis, these out-of-scope products accounted for *** to *** percent of overall production in Indonesia during the period examined in these investigations. Overall plant capacity of the Indonesian producers remained relatively stable, increasing by *** pounds, equivalent to *** percent, from 2015 to 2016 but

returning to 2015 levels in 2017 and remaining constant during the partial year periods. The overall plant capacity utilization fluctuated between a low of *** percent in 2016 to a high of *** percent in the first quarter of 2018.

Table VII-7
PET resin: Overall capacity and production on the same equipment as in-scope products by producers in Indonesia, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

Exports

According to GTA, the leading export markets for PET produced in Indonesia are the United States, Italy, and Japan (table VII-8). During 2017, Italy was the top export market for PET produced in Indonesia, accounting for 22.6 percent of total exports, followed by Japan, accounting for 14.8 percent, and the United States, accounting for 14.5 percent.

Table VII-8
PET: Exports from Indonesia, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Quantity (1,000 pounds)		
Exports from Indonesia to the United States	50,538	92,583	97,636
Exports from Indonesia to other major destination markets.--			
Italy	193,645	166,802	152,024
Japan	100,665	111,160	99,821
Vietnam	79,327	79,217	82,359
Bangladesh	33,520	40,352	43,317
China	153,076	81,828	28,729
Thailand	7,863	4,609	26,804
South Africa	456	24,291	20,953
Turkey	9,791	9,656	19,407
All other destination markets	183,963	114,601	102,744
Total exports from Indonesia	812,846	725,098	673,793
	Value (1,000 dollars)		
Exports from Indonesia to the United States	22,665	40,038	43,719
Exports from Indonesia to other major destination markets.--			
Italy	85,511	66,644	70,708
Japan	48,267	47,972	48,871
Vietnam	34,489	29,727	36,542
Bangladesh	13,397	14,833	18,850
China	44,201	21,148	9,163
Thailand	3,410	2,001	12,275
South Africa	251	9,722	9,200
Turkey	4,359	3,749	8,574
All other destination markets	79,220	41,041	44,432
Total exports from Indonesia	335,770	276,876	302,333

Table continued on next page.

Table VII-8—Continued
PET: Exports from Indonesia, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Unit value (dollars per pound)		
Exports from Indonesia to the United States	0.45	0.43	0.45
Exports from Indonesia to other major destination markets.--			
Italy	0.44	0.40	0.47
Japan	0.48	0.43	0.49
Vietnam	0.43	0.38	0.44
Bangladesh	0.40	0.37	0.44
China	0.29	0.26	0.32
Thailand	0.43	0.43	0.46
South Africa	0.55	0.40	0.44
Turkey	0.45	0.39	0.44
All other destination markets	0.43	0.36	0.43
Total exports from Indonesia	0.41	0.38	0.45
	Share of quantity (percent)		
Exports from Indonesia to the United States	6.2	12.8	14.5
Exports from Indonesia to other major destination markets.--			
Italy	23.8	23.0	22.6
Japan	12.4	15.3	14.8
Vietnam	9.8	10.9	12.2
Bangladesh	4.1	5.6	6.4
China	18.8	11.3	4.3
Thailand	1.0	0.6	4.0
South Africa	0.1	3.3	3.1
Turkey	1.2	1.3	2.9
All other destination markets	22.6	15.8	15.2
Total exports from Indonesia	100.0	100.0	100.0

Note.--Data presented may also include some volume of out-of-scope merchandise, such as PETG, PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram, and PET resin that contains more than 50 percent recycled product by weight.

Source: Official exports statistics under HS subheading 3907.60, 3907.61, and 3907.69 as reported by Statistics Indonesia in the Global Trade Atlas database, accessed July 10, 2018.

THE INDUSTRY IN KOREA

The Commission issued foreign producers'/exporters' questionnaires to six firms identified as possible producers and/or exporters of PET resin from Korea.[17] Usable responses to the Commission's questionnaire were received from three firms:[18] Lotte Chemical Corp. ("Lotte Chemical");[19] SK Chemicals Co., Ltd. ("SK Chemicals");[20] and TK Chemical Corp. ("TK Chemical").[21] These firms accounted for *** percent of Korean exports to the United States

[17] These firms were identified through a review of information submitted in the petitions and contained in *** records. Commission staff was unable to obtain valid contact information for the following seven additional firms identified as possible Korean PET resin producers in the petition: Daelim Corp., DuPont Korea Inc., Jinyoung Chemical Co., Ltd., Kolon Global Corp., Paarang Co., Ltd., Posco Daewoo Corp., and Samsung SDI Co., Ltd. According to *** records, four of these firms were not listed as exporters of PET resin from Korea and the remaining three firms together accounted for *** percent of total in-scope PET resin imports from Korea during 2017.

[18] Three producers in Korea submitted questionnaire responses during the preliminary phase of these investigations; however, only one firm (SK Chemicals) provided a response to the Commission's questionnaire in the final phase of these investigations. To address gaps in the data created by the absence of certain questionnaire responses in the final phase of these investigations, SK Chemicals data are supplemented with the previously submitted preliminary phase questionnaire responses and *** for Lotte Chemical and TK Chemical. The following three firms did not respond to the Commission's questionnaire: Hanwha Chemical Corp. ("Hanwha"), Huvis Corp. ("Huvis"), and SKC Co., Ltd. ("SKC"). Hanwha accounted for *** percent of total in-scope PET resin imports from Korea during 2017 and SKC does not export in-scope PET resin to the United States from Korea. Huvis, a Korean producer of PET resin, sells its PET resin to the Korean market but does not export PET resin to the United States. Huvis was ***.

[19] Lotte reported that PET resin accounted for *** percent of its total sales in the most recent fiscal year.

[20] SK Chemical reported that PET resin accounted for *** percent of its total sales in the most recent fiscal year.

[21] TK Chemical reported that PET resin accounted for *** percent of its total sales in the most recent fiscal year.

during 2017[22] and accounted for essentially all known Korean PET resin production.[23] Table VII-9 presents information on the PET resin operations of the responding producers in Korea.

Table VII-9
PET resin: Summary data for producers in Korea, 2017

* * * * * * *

Changes in operations

As presented in table VII-10, *** reported operational and/or organizational changes since January 1, 2015. ***.

Table VII-10
PET resin: Reported changes in operations by producers in Korea, since January 1, 2015

* * * * * * *

Operations on PET resin

Table VII-11 presents information on the PET resin operations of the responding producers in Korea. Korean producers' capacity to produce PET resin remained constant throughout the period of investigation at *** pounds. Production fluctuated downward, declining overall by *** percent, from *** pounds in 2015 to *** pounds in 2017. Korean production was *** percent higher in the first quarter of 2018 than in the comparable period in 2017 and projections indicate that production is expected to increase by *** percent in 2019 over the level reported in calendar year 2017. Capacity utilization increased by *** percentage points from *** percent in 2015 to *** percent in 2016, but declined in 2017 to *** percent. Capacity utilization was *** percent during the first quarter of 2018 and is projected to remain at levels similar to those in 2017 through 2019.

About *** of Korean producers' total shipments of PET resin are export shipments (*** percent in 2017), and the remainder are home market shipments (*** percent in 2017), almost all of which are shipments to the commercial home market.

Korean producers' total home market shipments fluctuated upward, increasing overall by *** percent from 2015 to 2017. However, total home market shipments were *** percent lower in January-March 2018 than in January-March 2017. Total home market shipments are projected to increase by *** percent from 2017 to 2019.

[22] Export coverage was calculated based on *** import data for in-scope manufacturers in Korea.

[23] Production coverage was calculated based on information provided in foreign producer questionnaire responses.

Table VII-11
PET resin: Data on the industry in Korea, 2015-17, January to March 2017, January to March 2018, and projected calendar years 2018 and 2019

* * * * * * *

From 2015 to 2017, the overwhelming majority (*** percent) of total export shipments were destined for non-U.S. markets. The principal other export markets for Lotte Chemical include ***; the principal other export markets for SK Chemicals include ***; and the principal other export markets for TK Chemicals include ***. Non-U.S. exports declined by *** percent, from *** pounds in 2015 to *** pounds in 2017 and are expected to decline further to *** pounds in 2019. Non-U.S. exports were *** percent lower during the first quarter of 2018 than in the comparable period of 2017.

Export shipments to the United States, on the other hand, increased by *** percent, from *** pounds in 2015 to *** pounds in 2017. The overwhelming majority of the increase in exports to the United States is attributable to *** shipments, which increased by *** pounds from 2015 to 2017. Export shipments to the United States were *** percent lower in January-March 2018 compared to January-March 2017, but exports of PET resin from Korea to the United States are projected to increase by *** percent from 2017 to 2019.

Alternative products

Responding Korean firms ***.

Exports

According to GTA, the leading export markets for PET from Korea are Vietnam, Italy, China, and the United States (table VII-12). During 2017, Vietnam was the top export market for PET from Korea, accounting for 15.9 percent of total PET resin exports from Korea, followed by Italy (12.7 percent), and China (12.4 percent). Exports of PET from Korea to the United States accounted for 10.9 percent of total PET exports from Korea during 2017.

Table VII-12
PET: Exports from Korea, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Quantity (1,000 pounds)		
Exports from Korea to the United States	70,482	165,317	224,544
Exports from Korea to other major destination markets.--			
Vietnam	266,386	328,849	329,568
Italy	233,810	208,095	261,925
China	199,180	238,732	255,704
Japan	142,635	124,341	142,201
Indonesia	108,085	122,422	118,226
Iran	96,933	136,401	114,727
Belgium	59,880	50,077	78,418
Turkey	21,977	52,579	76,184
All other destination markets	547,330	506,708	465,432
Total exports from Korea	1,746,697	1,933,520	2,066,929
	Value (1,000 dollars)		
Exports from Korea to the United States	46,162	90,181	125,385
Exports from Korea to other major destination markets.--			
Vietnam	128,582	143,643	155,794
Italy	103,416	85,921	122,750
China	97,714	124,632	148,106
Japan	84,199	69,314	81,872
Indonesia	49,439	50,854	55,122
Iran	46,978	55,553	52,512
Belgium	32,862	28,628	50,256
Turkey	9,590	21,281	34,130
All other destination markets	261,519	229,183	241,247
Total exports from Korea	860,460	899,190	1,067,174

Table continued on next page.

Table VII-12—Continued
PET: Exports from Korea, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Unit value (dollars per pound)		
Exports from Korea to the United States	0.65	0.55	0.56
Exports from Korea to other major destination markets.--			
Vietnam	0.48	0.44	0.47
Italy	0.44	0.41	0.47
China	0.49	0.52	0.58
Japan	0.59	0.56	0.58
Indonesia	0.46	0.42	0.47
Iran	0.48	0.41	0.46
Belgium	0.55	0.57	0.64
Turkey	0.44	0.40	0.45
All other destination markets	0.48	0.45	0.52
Total exports from Korea	0.49	0.47	0.52
	Share of quantity (percent)		
Exports from Korea to the United States	4.0	8.6	10.9
Exports from Korea to other major destination markets.--			
Vietnam	15.3	17.0	15.9
Italy	13.4	10.8	12.7
China	11.4	12.3	12.4
Japan	8.2	6.4	6.9
Indonesia	6.2	6.3	5.7
Iran	5.5	7.1	5.6
Belgium	3.4	2.6	3.8
Turkey	1.3	2.7	3.7
All other destination markets	31.3	26.2	22.5
Total exports from Korea	100.0	100.0	100.0

Note.--Data presented may also include some volume of out-of-scope merchandise, such as PETG, PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram, and PET resin that contains more than 50 percent recycled product by weight.

Source: Official exports statistics under HS subheading 3907.60, 3907.61, and 3907.69 as reported by Korea Customs and Trade Development Institution in the Global Trade Atlas database, accessed July 10, 2018.

THE INDUSTRY IN PAKISTAN

The Commission issued foreign producers'/exporters' questionnaires to two firms identified as possible producers and/or exporters of PET resin from Pakistan.[24] Usable responses to the Commission's questionnaire were received from one firm:[25] Novatex Limited ("Novatex").[26] Novatex reported that it accounted for *** percent of PET resin production in Pakistan and *** percent of exports of PET resin from Pakistan to the United States during 2017. Table VII-13 presents information on Novatex's PET resin operations.

Table VII-13
PET resin: Summary data for the producer in Pakistan, 2017

* * * * * * *

Changes in operations

As presented in table VII-14, Novatex indicated that it *** experienced operational and organizational changes since January 1, 2015. ***, Novatex ***. It also reported that it ***.

Table VII-14
PET resin: Reported changes in operations by producers in Pakistan, since January 1, 2015

* * * * * * *

[24] These firms were identified through a review of information submitted in the petitions and contained in *** records.

[25] The firm that did not respond to the Commission's questionnaire (Pakistan Synthetics Ltd.) was not listed as an exporter of PET resin from Pakistan in *** records. Pakistan Synthetics noted in its 2017 Annual Report that it converted its existing polyester staple fiber manufacturing plant into a PET resin manufacturing plant and commercial production of PET resin began in October 2016. The company produced 46.2 million pounds and sold 25.5 million pounds of PET resin during 2017. For the nine months ending in March 2018, it reported production of 43.2 million pounds of PET resin compared with 35.0 million pounds during the corresponding period ending in March 2017. It sold 41.7 million pounds of PET resin in the nine months ending in March 2018 compared with 10.8 million pounds during the corresponding period ending in March 2017. It reported plans to become vertically integrated and consume its own production of PET resin to supply the packaging and beverage industries in Pakistan with end product. It reported the integrated downstream packaging plant to commence commercial production in May 2018. *Pakistan Synthetics Limited Annual Report 2017*, http://pslpet.com/wp-content/uploads/2017/03/PSL-Annual-Rep-2017.pdf, retrieved August 16, 2018; and *Pakistan Synthetics Limited Report & Financial Information for the Nine Months Ended 31 March 2018*, http://pslpet.com/wp-content/uploads/2018/04/PSL-MARCH-2018.pdf, retrieved August 16, 2018.

[26] Novatex reported that PET resin accounted for *** percent of its total sales in the most recent fiscal year.

Operations on PET resin

Table VII-15 presents information on Novatex's PET resin operations. Reflecting capacity increases *** in 2016, Novatex's reported capacity to produce PET resin fluctuated upward, increasing by *** percent, from *** pounds in 2015 to *** pounds in 2017. Its capacity was *** percent higher in January-March 2018 compared to January-March 2017, but is projected to remain at 2017 levels during 2018 and 2019. Novatex's production of PET resin increased by *** percent, from *** pounds in 2015 to *** pounds in 2017, and was *** percent higher in January-March 2018 than in January-March 2017. Production is projected to increase by *** percent over 2017 levels to *** pounds by 2019. Capacity utilization fluctuated upward from *** percent in 2015 to *** percent in 2017, and was *** percent in the first quarter of 2018. It is projected to continue to increase to *** percent by 2019.

Table VII-15
PET resin: Data on industry in Pakistan, 2015-17, January to March 2017, January to March 2018, and projected calendar years 2018 and 2019

* * * * * * *

Slightly more than *** of Novatex's total shipments of PET resin are exports (*** percent in 2017), and the remainder are home market shipments (*** percent in 2017), *** are commercial home market shipments. Novatex's total home market shipments, which accounted for a declining share of the firm's total shipments from 2015 to 2017, fluctuated upward, increasing overall by *** percent from 2015 to 2017. Total home market shipments were *** percent higher in January-March 2018 than in January-March 2017. Total home market shipments are projected to increase by *** percent from 2017 to 2019.

From 2015 to 2017, the majority of export shipments were destined to non-U.S. markets, accounting for *** percent of total exports in 2015, *** percent in 2016, *** percent in 2017, *** percent during the first quarter of 2017, and *** percent during the first quarter of 2018. Novatex identified ***. Exports to these other markets increased from 2015 to 2016, but declined in 2017 to a level that was *** percent higher than that reported in 2015. Such exports were lower during the first quarter of 2018 than in the comparable period of 2017.

Novatex's exports to the United States from Pakistan increased by *** percent between 2015 and 2017, from *** pounds to *** pounds, and were *** percent higher in January-March 2018 than in January-March 2017. Export shipments from Pakistan to the United States are projected to decline by *** percent from 2017 to 2018, but are expected to increase in 2019 to a level that is *** percent higher than that reported for 2017.

Alternative products

As shown in table VII-16, Novatex reported production of other products on the same equipment and machinery used to produce PET resin in Pakistan. It reported the ability to shift production from in-scope PET resin to ***. These other products accounted for *** percent of the firm's overall plant production during 2017. The firm's overall plant capacity increased by *** percent from *** pounds in 2015 to *** pounds in 2017. Overall plant capacity remained at *** pounds during the first quarter of 2017 and the comparable period in 2018. Overall production also increased by *** percent from 2015 to 2017 and was *** percent higher in January-March 2018 than in January-March 2017. Overall plant capacity utilization fluctuated upward from *** percent in 2015 to *** percent in 2017 and was *** percent during the first quarter of 2018.

Table VII-16
PET resin: Overall capacity and production on the same equipment as in-scope products by producers in Pakistan, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

Exports

According to GTA, the leading export markets for PET from Pakistan are the United States and Canada (table VII-17). During 2017, the United States was the top export market for PET from Pakistan, accounting for 48.8 percent of total exports of PET from Pakistan, followed by Canada, accounting for 12.4 percent.

Table VII-17
PET: Exports from Pakistan, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Quantity (1,000 pounds)		
Exports from Pakistan to the United States	35,907	63,718	175,438
Exports from Pakistan to other major destination markets.--			
Canada	33,241	31,395	44,739
United Arab Emirates	14,581	6,094	17,730
Italy	12,555	24,498	17,013
Turkey	43,281	33,134	15,465
Belgium	3,018	3,931	12,350
Germany	7,744	7,849	11,303
Slovenia	---	1,369	6,744
Afghanistan	8,630	7,316	6,686
All other destination markets	64,598	47,105	51,967
Total exports from Pakistan	223,556	226,408	359,433
	Value (1,000 dollars)		
Exports from Pakistan to the United States	23,477	42,295	84,960
Exports from Pakistan to other major destination markets.--			
Canada	17,752	22,598	21,499
United Arab Emirates	6,800	2,744	8,108
Italy	6,896	12,998	8,127
Turkey	19,520	18,561	6,953
Belgium	2,402	2,437	6,084
Germany	4,462	5,279	6,337
Slovenia	---	582	3,402
Afghanistan	4,048	3,391	2,975
All other destination markets	31,737	24,951	23,675
Total exports from Pakistan	117,095	135,835	172,120

Table continued on next page.

Table VII-17—Continued
PET: Exports from Pakistan, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Unit value (dollars per pound)		
Exports from Pakistan to the United States	0.65	0.66	0.48
Exports from Pakistan to other major destination markets.--			
Canada	0.53	0.72	0.48
United Arab Emirates	0.47	0.45	0.46
Italy	0.55	0.53	0.48
Turkey	0.45	0.56	0.45
Belgium	0.80	0.62	0.49
Germany	0.58	0.67	0.56
Slovenia	---	0.43	0.50
Afghanistan	0.47	0.46	0.44
All other destination markets	0.49	0.53	0.46
Total exports from Pakistan	0.52	0.60	0.48
	Share of quantity (percent)		
Exports from Pakistan to the United States	16.1	28.1	48.8
Exports from Pakistan to other major destination markets.--			
Canada	14.9	13.9	12.4
United Arab Emirates	6.5	2.7	4.9
Italy	5.6	10.8	4.7
Turkey	19.4	14.6	4.3
Belgium	1.3	1.7	3.4
Germany	3.5	3.5	3.1
Slovenia	---	0.6	1.9
Afghanistan	3.9	3.2	1.9
All other destination markets	28.9	20.8	14.5
Total exports from Pakistan	100.0	100.0	100.0

Note.--Data presented may also include some volume of out-of-scope merchandise, such as PETG, PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram, and PET resin that contains more than 50 percent recycled product by weight.

Source: Official exports statistics under HS subheading 3907.60, 3907.61, and 3907.69 as reported by UN Comtrade in the Global Trade Atlas database, accessed July 10, 2018.

THE INDUSTRY IN TAIWAN

The Commission issued foreign producers'/exporters' questionnaires to seven firms identified as possible producers and/or exporters of PET resin from Taiwan.[27] Usable responses to the Commission's questionnaire were received from two firms:[28] Far Eastern New Century Corporation ("FENC" or "Far Eastern")[29] and Lealea Enterprise Co. Ltd. ("Lealea").[30] *** is the larger of the two responding producers, accounting for *** percent of reported production in 2017. These firms accounted for *** percent of exports from Taiwan to the United States during 2017[31] and an estimated *** percent of total PET resin production in Taiwan.[32] Table VII-18 presents information on the PET resin operations of the responding producers in Taiwan.

Table VII-18
PET resin: Summary data for producers in Taiwan, 2017

* * * * * * *

Changes in operations

*** did not report any operational or organization changes in Taiwan since January 1, 2015 in their responses to the Commission's foreign producer questionnaires. However, as previously indicated in Part III of this report, Far Eastern acquired two U.S. PET resin facilities as part of the M&G bankruptcy proceedings in March 2018. Specifically, Far Eastern bought the M&G plastics plant in West Virginia, which was shut down in October 2017.[33] The newly named

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[27] These firms were identified through a review of information submitted in the petitions and contained in *** records.

[28] Commission staff attempted on multiple occasions to secure a response to the foreign producer questionnaire from the following five non-responding Taiwan firms: Hi-Pet Plastic Co., Ltd.; Nan Ya Plastics Corp. ("Nan Ya Taiwan"); Shinkong Synthetic Fibers ("Shinkong"); Tainan Spinning Co., Ltd.; and VPET Plastic Industrial Co.,Ltd. *** Shinkong, who participated in the companion Commerce proceedings, indicated that Shinkong "***." Email from ***, July 23, 2018. *** noted the following concerning the lack of response from Nan Ya Taiwan: "***." Email from ***. Nan Ya (U.S.) also testified that it was not aware that there are any imports into the United States of PET resin produced by its parent company in Taiwan. Hearing transcript, p. 62 (Freeman).

[29] Far Eastern reported that PET resin accounted for *** percent of its total sales in the most recent fiscal year.

[30] Lealea reported that PET resin accounted for *** percent of its total sales in the most recent fiscal year.

[31] Export coverage is calculated based on *** import data for in-scope manufacturers in Taiwan.

[32] Production coverage is calculated based on information provided in foreign producer questionnaire responses.

[33] "Corpus Christi Polymers: Acquisition of the PTA/PET complex of M&G in Texas," *Plasticker-News*, April 10, 2018, https://plasticker.de/Plastics_News_32445_Corpus_Christi_Polymers_Acquisition_of_the_PTA_PET_complex_of_M+G_in_Texas, retrieved August 8, 2018; and Acosta, Tim, "Judge OKs bankruptcy sale of

West Virginia PET resin facility (APG Polytech, LLC) was restarted in July 2018.[34] In addition, the parent company of Far Eastern (along with Alpek (owner of U.S. PET resin producer DAK) and Indorama Ventures (parent of U.S. PET resin producer Indorama)) is part of the joint venture (Corpus Christi Polymers) that was created specifically for the purchase of M&G's incomplete Corpus Christi plant. The joint venture plans to complete the construction of the Corpus Christi complex but a timeline for completion of the facility has not been provided by Corpus Christi Polymers.[35]

Operations on PET resin

Table VII-19 presents information on the PET resin operations of the responding producers in Taiwan. The aggregate capacity of these two producers increased overall by *** percent from 2015 to 2017, and was *** percent higher in the first quarter of 2018 than in the comparable period of 2017. Capacity is projected to increase by *** percent from *** pounds in 2017 to *** pounds in 2018. Likewise, production increased by *** percent, from *** pounds in 2015 to *** pounds in 2017, and is projected to increase further by *** percent to *** pounds by 2018-19. Reported production in Taiwan was *** percent higher in January-March 2018 than in January-March 2017. Capacity utilization also increased from *** percent in 2015 to *** percent in 2017, and was *** percent during the first quarter of 2018.

Table VII-19
PET resin: Data on industry in Taiwan, 2015-17, January to March 2017, January to March 2018, and projected calendar years 2018 and 2019

* * * * * * *

An overwhelming majority of the Taiwan producers' total shipments of PET resin are export shipments (*** percent of total shipments in 2017). Home market shipments, a majority of which were ***, accounted for *** percent of total shipments in 2015, *** percent in 2017, and *** percent during the first quarter of 2018.

The total home market shipments of PET resin producers in Taiwan increased by *** percent in 2015-17, from *** pounds to *** pounds. Total home market shipments were lower in January-March 2018 than in January-March 2017 and are projected to decrease by ***

M&G's Corpus Christi plant," *Corpus Christi Caller-Times*, April 2, 2018, https://www.caller.com/story/news/local/2018/04/02/judge-oks-bankruptcy-sale-m-gs-corpus-christi-plant-port-corpus-christi/478664002/, retrieved August 8, 2018.

[34] Certificate of Amendment of Certificate of Formation of FE Polytech, LLC, Information for the Transfer of Control, March 29, 2018, https://www.nrc.gov/docs/ML1810/ML18100A360.pdf, retrieved August 13, 2018; and hearing transcript, p. 30 (Freeman).

[35] Acosta, Tim, "Judge OKs bankruptcy sale of M&G's Corpus Christi plant," *Corpus Christi Caller-Times*, April 2, 2018, https://www.caller.com/story/news/local/2018/04/02/judge-oks-bankruptcy-sale-m-gs-corpus-christi-plant-port-corpus-christi/478664002/, retrieved August 8, 2018.

percent from 2017 to 2018, as internal consumption declines are expected to be greater than increases in commercial home market shipments.

From 2015 to 2017, the majority of export shipments from Taiwan were destined for non-U.S. markets. Far Eastern identified *** as the top three principal non-U.S. export markets in 2017; Lealea identified *** as its top non-U.S. export markets. Export shipments to the United States from the responding producers in Taiwan increased by *** percent in 2015-17, from *** pounds to *** pounds, and are expected to decline to *** pounds in 2018 and to *** by 2019. Such exports to the United States were *** percent higher in January-March 2018 than in the comparable period in 2017.

Alternative products

Far Eastern reported *** (table VII-20). Specifically, ***. *** accounted for *** percent of aggregate Taiwan production by the two responding firms during 2017, whereas in-scope PET resin production accounted for the remaining *** percent of the total. Overall aggregate plant capacity and production increased by *** percent and *** percent from 2015 to 2017, respectively, and were *** percent and *** percent higher in January-March 2018 than in January-March 2017, respectively.

Table VII-20
PET resin: Overall capacity and production on the same equipment as in-scope products by producers in Taiwan, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

Exports

According to GTA, the leading export markets for PET from Taiwan during 2017 were Japan, the United States, and Vietnam (table VII-21). During 2017, Japan was the top export market for PET from Taiwan, accounting for 31.0 percent of total exports of PET from Taiwan, followed by the United States, accounting for 15.9 percent, and Vietnam, accounting for 6.2 percent.

Table VII-21
PET: Exports from Taiwan, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Quantity (1,000 pounds)		
Exports from Taiwan to the United States	261,987	314,058	316,977
Exports from Taiwan to other major destination markets.--			
Japan	459,578	446,043	617,959
Vietnam	46,556	98,414	124,297
El Salvador	67,029	72,655	77,126
China	56,711	77,172	73,030
Australia	67,069	66,883	61,562
Peru	75,777	111,275	60,337
Saudi Arabia	59,889	54,710	49,110
Honduras	48,370	54,108	47,120
All other destination markets	642,225	608,701	568,695
Total exports from Taiwan	1,785,190	1,904,018	1,996,213
	Value (1,000 dollars)		
Exports from Taiwan to the United States	122,937	134,324	151,686
Exports from Taiwan to other major destination markets.--			
Japan	222,169	199,801	299,769
Vietnam	19,265	38,642	56,707
El Salvador	31,378	30,741	35,944
China	26,106	33,123	34,311
Australia	32,132	27,959	27,935
Peru	36,260	44,518	26,141
Saudi Arabia	26,688	21,335	22,181
Honduras	22,656	23,033	21,928
All other destination markets	293,336	250,588	259,929
Total exports from Taiwan	832,926	804,065	936,531

Table continued on next page.

Table VII-21—Continued
PET: Exports from Taiwan, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Unit value (dollars per pound)		
Exports from Taiwan to the United States	0.47	0.43	0.48
Exports from Taiwan to other major destination markets.--			
Japan	0.48	0.45	0.49
Vietnam	0.41	0.39	0.46
El Salvador	0.47	0.42	0.47
China	0.46	0.43	0.47
Australia	0.48	0.42	0.45
Peru	0.48	0.40	0.43
Saudi Arabia	0.45	0.39	0.45
Honduras	0.47	0.43	0.47
All other destination markets	0.46	0.41	0.46
Total exports from Taiwan	0.47	0.42	0.47
	Share of quantity (percent)		
Exports from Taiwan to the United States	14.7	16.5	15.9
Exports from Taiwan to other major destination markets.--			
Japan	25.7	23.4	31.0
Vietnam	2.6	5.2	6.2
El Salvador	3.8	3.8	3.9
China	3.2	4.1	3.7
Australia	3.8	3.5	3.1
Peru	4.2	5.8	3.0
Saudi Arabia	3.4	2.9	2.5
Honduras	2.7	2.8	2.4
All other destination markets	36.0	32.0	28.5
Total exports from Taiwan	100.0	100.0	100.0

Note.--Data presented may also include some volume of out-of-scope merchandise, such as PETG, PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram, and PET resin that contains more than 50 percent recycled product by weight.

Source: Official exports statistics under HS subheading 3907.60, 3907.61, and 3907.69 as reported by Taiwan Directorate General of Customs in the Global Trade Atlas database, retrieved July 10, 2018.

SUBJECT COUNTRIES COMBINED

Table VII-22 presents combined data on PET resin operations of the reporting subject producers in the five subject countries.

Table VII-22
PET resin: Data on industry in subject countries, 2015-17, January to March 2017, and January to March 2018 and projected calendar years 2018 and 2019

Item	Actual experience					Projections	
	Calendar year			January to March		Calendar year	
	2015	2016	2017	2017	2018	2018	2019
	Quantity (1,000 pounds)						
Capacity	6,169,284	6,795,015	6,777,834	1,669,318	1,753,438	6,967,794	6,995,383
Production	5,266,688	5,817,387	5,676,272	1,409,555	1,447,039	6,005,591	6,035,107
End-of-period inventories	266,614	316,223	242,219	304,230	273,605	255,564	192,376
Shipments:							
Home market shipments:							
Internal consumption/ transfers	234,799	295,601	301,909	71,048	67,775	294,560	299,782
Commercial home market Shipments	2,307,150	2,444,652	2,406,277	566,012	601,911	2,532,227	2,546,718
Total home market shipments	2,541,949	2,740,253	2,708,186	637,060	669,686	2,826,787	2,846,500
Export shipments to:							
United States	277,552	707,798	817,676	223,106	114,715	295,573	298,879
All other markets	2,477,832	2,312,999	2,195,685	550,195	651,072	2,886,928	2,953,526
Total exports	2,755,384	3,020,797	3,013,361	773,301	765,787	3,182,501	3,252,405
Total shipments	5,297,333	5,761,050	5,721,547	1,410,361	1,435,473	6,009,288	6,098,905
	Ratios and shares (percent)						
Capacity utilization	85.4	85.6	83.7	84.4	82.5	86.2	86.3
Inventories/production	5.1	5.4	4.3	5.4	4.7	4.3	3.2
Inventories/total shipments	5.0	5.5	4.2	5.4	4.8	4.3	3.2
Share of shipments:							
Home market shipments:							
Internal consumption/ transfers	4.4	5.1	5.3	5.0	4.7	4.9	4.9
Commercial home market Shipments	43.6	42.4	42.1	40.1	41.9	42.1	41.8
Total home market shipments	48.0	47.6	47.3	45.2	46.7	47.0	46.7
Export shipments to:							
United States	5.2	12.3	14.3	15.8	8.0	4.9	4.9
All other markets	46.8	40.1	38.4	39.0	45.4	48.0	48.4
Total exports	52.0	52.4	52.7	54.8	53.3	53.0	53.3
Total shipments	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

These data show that capacity to produce subject PET resin in the five subject countries combined, which was 96.9 percent of the level of total U.S. consumption of PET resin during 2017, increased overall by 9.9 percent in 2015-17, from 6.2 billion pounds to 6.8 billion pounds, and is projected to increase further in 2018-19. Capacity was 5.0 percent higher during the first quarter of 2018 than in the comparable period of 2017. Exports of PET resin to the United States from all five subject countries combined, which accounted for 14.3 percent of total shipments by producers in these countries, increased by 194.6 percent, from 277.6 million pounds in 2015 to 817.7 million pounds in 2017. These exports were 48.6 percent lower during the first quarter of 2018 than in the comparable period in 2017 and are projected to decline from 2017 levels during 2018-19.

U.S. INVENTORIES OF IMPORTED MERCHANDISE

Table VII-23 presents data on U.S. importers' reported inventories of PET resin. U.S. importers' end-of-period inventories of imports from subject countries increased by *** percent from 2015 to 2017, but were *** percent lower during the first quarter of 2018 than the comparable period in 2017. U.S. importers' end-of-period inventories of imports from Brazil, Indonesia, Korea, Pakistan, and Taiwan increased by *** percent, *** percent, *** percent, *** percent, and *** percent, respectively, from 2015 to 2017. Taiwan and Brazil held the largest shares of subject country end-of-period inventories in 2017, accounting for *** percent and *** percent of the total, respectively.

Table VII-23
PET resin: U.S. importers' end-of-period inventories of imports by source, 2015-17, January to March 2017, and January to March 2018

Item	Calendar year			January to March	
	2015	2016	2017	2017	2018
	Inventories (1,000 pounds); Ratios (percent)				
Imports from Brazil: Inventories	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***
Imports from Indonesia: Inventories	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***
Imports from Korea: Inventories	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***
Imports from Pakistan: Inventories	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***
Imports from Taiwan: Inventories	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***
Imports from subject sources: Inventories	24,612	69,572	87,068	85,996	38,478
Ratio to U.S. imports	8.2	9.2	10.2	9.2	13.6
Ratio to U.S. shipments of imports	9.3	9.8	10.5	9.9	8.3
Ratio to total shipments of imports	8.6	9.8	10.4	9.9	8.3

Table continued on next page.

Table VII-23—Continued
PET resin: U.S. importers' end-of-period inventories of imports by source, 2015-17, January to March 2017, and January to March 2018

Item	Calendar year			January to March	
	2015	2016	2017	2017	2018
	Inventories (1,000 pounds); Ratios (percent)				
Imports from Canada: Inventories	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***
Imports from Mexico: Inventories	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***
Imports from all other sources: Inventories	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***
Imports from nonsubject sources: Inventories	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***
Imports from all import sources: Inventories	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. IMPORTERS' OUTSTANDING ORDERS

The Commission requested importers to indicate whether they imported or arranged for the importation of PET resin from Brazil, Indonesia, Korea, Pakistan, and/or Taiwan after March 30, 2018 (table VII-24). Responding importers from Brazil and Indonesia reported that there were *** arranged imports of PET resin after ***; responding importers from Pakistan reported that there were *** arranged imports after ***; and responding importers from Korea and Taiwan reported that there were *** arranged imports after ***. Responding importers of PET resin from Korea reported a total of *** pounds arranged for importation during ***; importers from Pakistan reported a total of *** pounds of arranged imports during ***; and importers from Taiwan reported a total of *** pounds of arranged imports during ***. Thirteen responding importers reported outstanding orders of PET resin from subject and nonsubject sources during April 2018 to March 2019.

Table VII-24
PET resin: Arranged imports, April 2018 through March 2019

* * * * * * *

ANTIDUMPING OR COUNTERVAILING DUTY ORDERS IN THIRD-COUNTRY MARKETS

The subject countries are affected by various import injury measures in other third-country markets.

Brazil

*** reported that an antidumping duty order is in place in Argentina on imports of PET resin from Brazil. It indicated that, in June 27, 2006, the Argentine Official Newspaper published the administrative act that imposes the following antidumping duty measures on exports of PET resin from Brazil to Argentina: (1) exports from M&G Brazil (3.17 percent) and (2) exports from other Brazilian producers (18.87 percent).[36]

Indonesia

Indonesia has been subject to a 2.87 percent antidumping duty rate in Malaysia since March 2015.[37] In addition, Indonesia is subject to a safeguard measure in Turkey put in place in November 2011 and an investigation on whether to extend the measure was initiated in June

[36] Questionnaire response from ***.
[37] Questionnaire responses from ***.

2017.[38] Polyethylene terephthalate exported from Indonesia is subject to a 5.1 percent ad valorem duty order in Argentina, effective March 15, 2017.[39]

Korea

Antidumping duty orders have been in place on PET resin exports from Korea into Argentina since September 28, 2017 (17.61 percent), South Africa since July 12, 2016 (35.64 percent), and Malaysia since March 10, 2015 (14.91 percent). Safeguard measures have been in place on exports of PET resin from Korea to Turkey since November 8, 2014 (6.55 percent).[40]

Antidumping proceedings against exports of PET resin from Korea are currently ongoing in Indonesia.[41] Komite Anti Dumping of Indonesia ("KADI") completed its investigations concerning PET resin imported from Korea (as well as from China and Malaysia) and forwarded the following recommended antidumping duty rates for firms in Korea to the Indonesian Ministry of Finance: KP Chemtech and Kolon Industries Inc. (6.2 percent); non-sampled producers/exporters Lotte Chemical, SK Chemicals, Toray Advanced Korea, and Huvis Corp. (6.6 percent); and other companies (26 percent).[42] A final decision concerning the imposition of antidumping duties has not been made by the Indonesian Ministry of Finance.[43]

Pakistan

Safeguard measures have been in place in Turkey on exports of PET resin from Pakistan since 2011.[44] The applicable safeguard duties on PET exports from Pakistan into Turkey are as follows: 2011-12 (8.0 percent), 2012-13 (7.5 percent), 2013-14 (7.0 percent), 2014-15 (6.75 percent), 2015-16 (6.65 percent), 2016-17 (6.55 percent), 2017-18 (6.4 percent), 2018-19 (6.2 percent), and 2019-20 (6.0 percent). An investigation in Turkey was initiated in June 2017 to extend the safeguard measure.[45] In addition, antidumping and countervailing duty investigations on imports of PET resin from Pakistan were initiated in Canada in August 2017.[46]

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[38] Petitioner's postconference brief, Exhibit 15.

[39] *Semi-Annual Report Under Article 16.4 of the Agreement: Argentina, World Trade Organization, Committee on Anti-Dumping Practices*, August 24, 2017.

[40] Questionnaire responses from ***.

[41] Sulaiman, Stefanno Reinard, "Groups dispute planned antidumping duties on PET," *The Jakarta Post*, April 21, 2018, http://www.thejakartapost.com/news/2018/04/21/groups-dispute-planned-antidumping-duties-pet.html, retrieved August 30, 2018.

[42] KADI recommended a three percent antidumping duty rate for firms in Malaysia and antidumping duty rates ranging from 0.4 percent to 26 percent for firms in China. "KADI discloses anti-dumping duties on PET resin imported from China, Korea and Malaysia," July 14, 2017, https://www.ccfgroup.com/newscenter/newsview.php?Class_ID=600000&Info_ID=20170714096, retrieved September 21, 2018.

[43] Hearing transcript, p. 13 (Chairul).

[44] Questionnaire response from ***.

[45] Petitioner's postconference brief, Exhibit 15.

[46] Ibid.

Taiwan

Antidumping duty orders have been in place on exports of PET resin from Taiwan into Argentina since September 28, 2016 (15 percent) and into South Africa since July 8, 2016 (75 percent). In addition, an antidumping duty order on exports of PET resin from Taiwan into Brazil has been in place since November 28, 2016. Far Eastern received a zero percent margin and all other firms in Taiwan received a 52.1 percent antidumping rate.[47]

INFORMATION ON NONSUBJECT COUNTRIES

In assessing whether the domestic industry is materially injured or threatened with material injury "by reason of subject imports," the legislative history states "that the Commission must examine all relevant evidence, including any known factors, other than the dumped or subsidized imports, that may be injuring the domestic industry, and that the Commission must examine those other factors (including non-subject imports) 'to ensure that it is not attributing injury from other sources to the subject imports.'"[48]

Global capacity, production, and shipments

According to published sources, global capacity in 2017 was ***.[49] China accounts for approximately *** of the global production capacity. North America's share of global capacity declined from *** percent in 1990 to *** percent in 2017. In 2017, China, Korea, Taiwan, Oman, and Mexico were the ***, which together accounted for more than *** of global exports.[50] Table VII-25 presents global capacity, production, trade, and consumption data on a regional basis. Figure VII-1 shows the top ten world producers, by shareholder in 2017. Figure VII-2 shows world consumption shares by region for 2017. Table VII-26 shows world consumption by end use for 2017 and forecasted consumption for 2022. Even though consumption is expected to increase, the percentages of consumption by end use are predicted to remain largely the same. The largest end use globally is beverages, which accounted for *** percent of global usage in 2017 and is forecast to account for *** percent in 2022.[51] Table VII-27 presents export data for the larger PET resin-producing countries for 2015-17.

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[47] Questionnaire response from ***.

[48] *Mittal Steel Point Lisas Ltd. v. United States*, Slip Op. 2007-1552 at 17 (Fed. Cir. Sept. 18, 2008), quoting from Statement of Administrative Action on Uruguay Round Agreements Act, H.R. Rep. 103-316, Vol. I at 851-52; *see also Bratsk Aluminum Smelter v. United States*, 444 F.3d 1369 (Fed. Cir. 2006).

[49] The most recent annual period for which published global capacity data are available is 2017. *Chemical Economics Handbook*: *Polyethylene Terephthalate (PET) Solid-State Resins*, IHS, March 2018, p. 32.

[50] *Chemical Economics Handbook*: *Polyethylene Terephthalate (PET) Solid-State Resins*, IHS, March 2018, p. 39.

[51] *Chemical Economics Handbook*: *Polyethylene Terephthalate (PET) Solid-State Resins*, IHS, March 2018, pp. 6-7.

Table VII-25
PET: World capacity, production, imports, exports, and consumption 2016 and 2017, projected capacity and consumption 2022, and annual growth rate, 2017-22 (forecast), by region/country

* * * * * * *

Figure VII-1
PET resin: World producers of PET resins by shareholder, 2017

* * * * * * *

Figure VII-2
PET resin: World consumption by region, 1997-2017

* * * * * * *

Table VII-26
PET: World consumption by end use–2017 and forecast 2022

* * * * * * *

Table VII-27
PET: Global exports, 2015-17

Exporter	Calendar year		
	2015	2016	2017
	Quantity (1,000 pounds)		
United States	545,871	509,153	501,591
Subject sources:			
Brazil	201,450	398,546	398,581
Indonesia	812,846	725,098	673,793
Korea	1,746,697	1,933,520	2,066,929
Pakistan	223,556	226,408	359,433
Taiwan	1,785,190	1,904,018	1,996,213
Total subject sources	4,769,740	5,187,589	5,494,949
All other major reporting exporters.--			
China	4,619,865	4,819,113	5,465,220
India	1,395,379	1,982,820	2,319,333
Lithuania	900,129	989,262	1,000,540
Netherlands	1,095,992	1,034,379	982,269
Mexico	1,024,574	1,000,603	908,607
Thailand	813,034	810,491	821,176
Germany	791,665	808,056	814,466
Belgium	834,966	943,423	668,783
Spain	504,887	474,012	562,568
Malaysia	401,234	424,968	466,771
All other exporters	3,337,616	3,079,173	2,413,123
Total global exports	21,034,951	22,063,042	22,419,393
	Value (1,000 dollars)		
United States	436,100	387,671	356,689
Subject sources:			
Brazil	104,480	187,372	204,556
Indonesia	335,770	276,876	302,333
Korea	860,460	899,190	1,067,174
Pakistan	117,095	135,835	172,120
Taiwan	832,926	804,065	936,531
Total subject sources	2,250,731	2,303,338	2,682,715
All other major reporting exporters.--			
China	2,049,216	1,904,491	2,419,413
India	591,431	761,794	1,024,844
Lithuania	437,804	437,278	514,348
Netherlands	557,214	485,139	519,377
Mexico	543,285	462,904	462,492
Thailand	383,855	328,063	380,872
Germany	400,240	374,953	440,990
Belgium	420,606	434,497	357,361
Spain	249,880	214,696	273,428
Malaysia	186,309	182,272	222,570
All other exporters	1,649,852	1,383,961	1,185,147
Total global exports	10,156,521	9,661,056	10,840,244

Table continued on next page.

Table VII-27—Continued
PET: Global exports, 2015-17

Exporter	Calendar year		
	2015	2016	2017
	Unit value (dollars per pound)		
United States	0.80	0.76	0.71
Subject sources:			
Brazil	0.52	0.47	0.51
Indonesia	0.41	0.38	0.45
Korea	0.49	0.47	0.52
Pakistan	0.52	0.60	0.48
Taiwan	0.47	0.42	0.47
Total subject sources	0.47	0.44	0.49
All other major reporting exporters.--			
China	0.44	0.40	0.44
India	0.42	0.38	0.44
Lithuania	0.49	0.44	0.51
Netherlands	0.51	0.47	0.53
Mexico	0.53	0.46	0.51
Thailand	0.47	0.40	0.46
Germany	0.51	0.46	0.54
Belgium	0.50	0.46	0.53
Spain	0.49	0.45	0.49
Malaysia	0.46	0.43	0.48
All other exporters	0.49	0.45	0.49
Total global exports	0.48	0.44	0.48
	Share of quantity (percent)		
United States	2.6	2.3	2.2
Subject sources:			
Brazil	1.0	1.8	1.8
Indonesia	3.9	3.3	3.0
Korea	8.3	8.8	9.2
Pakistan	1.1	1.0	1.6
Taiwan	8.5	8.6	8.9
Total subject sources	22.7	23.5	24.5
All other major reporting exporters.--			
China	22.0	21.8	24.4
India	6.6	9.0	10.3
Lithuania	4.3	4.5	4.5
Netherlands	5.2	4.7	4.4
Mexico	4.9	4.5	4.1
Thailand	3.9	3.7	3.7
Germany	3.8	3.7	3.6
Belgium	4.0	4.3	3.0
Spain	2.4	2.1	2.5
Malaysia	1.9	1.9	2.1
All other exporters	15.9	14.0	10.8
Total global exports	100.0	100.0	100.0

Note.--Data presented may also include some volume of out-of-scope merchandise, such as PETG, PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram, and PET resin that contains more than 50 percent recycled product by weight.

Source: Official exports statistics under HS subheading 7303.60, 7303.61, and 7303.69 as reported by various national statistical authorities in the IHS/GTA database, accessed July 9, 2018.

Canada

DAK Americas Canada is believed to be the sole producer of PET resin in Canada, with an annual virgin capacity of *** in 2017. Total production in Canada in 2017 was ***, and consumption was ***. Due to the implementation of antidumping duties by the United States, the Canadian plant has *** production.[52] Consumption is forecasted to increase, *** over the next five years. The largest end use for PET resin in Canada is ***, which accounted for *** percent of the country's total consumption in 2017. The remaining *** percent of consumption in Canada was for ***. End-use shares of consumption in Canada are not expected to change substantially; over the ***, consumption has ***, and over ***, demand is expected to increase at *** percent annually, on average.[53]

According to data compiled in response to Commission questionnaires, Canada was a substantial nonsubject country source of imported PET resin, especially in 2015, with U.S. imports of PET resin from Canada accounting for *** percent of total U.S. imports in terms of quantity (see table IV-2). By comparison, in 2016 and 2017 Canada accounted for *** percent and *** percent, respectively, of total U.S. imports in terms of quantity. GTA data indicate that the United States is the leading export market for PET produced in Canada (table VII-28). During 2017, exports of PET to the United States amounted to 241.1 million pounds and accounted for 92.6 percent of total exports.

[52] *Chemical Economics Handbook*: *Polyethylene Terephthalate (PET) Solid-State Resins*, IHS, March 2018, p. 53.

[53] *Chemical Economics Handbook*: *Polyethylene Terephthalate (PET) Solid-State Resins*, IHS, March 2018, pp. 53-56.

Table VII-28

PET: Exports from Canada, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Quantity (1,000 pounds)		
Exports from Canada to the United States	336,121	254,493	241,145
Exports from Canada to other major destination markets.--			
Malaysia	7,779	7,871	7,577
Luxembourg	16	10	4,456
Portugal	---	436	3,857
China	3,541	2,137	1,471
Mexico	936	5,721	1,186
Ireland	423	355	351
Netherlands	113	97	71
Korea	148	50	54
All other destination markets	843	52	122
Total exports from Canada	349,920	271,222	260,291
	Value (1,000 dollars)		
Exports from Canada to the United States	193,540	120,154	119,855
Exports from Canada to other major destination markets.--			
Malaysia	7,512	7,863	7,785
Luxembourg	12	8	2,111
Portugal	---	218	2,020
China	3,756	2,209	1,508
Mexico	551	3,099	922
Ireland	400	368	357
Netherlands	104	100	75
Korea	158	56	61
All other destination markets	451	65	112
Total exports from Canada	206,483	134,141	134,807

Table continued on next page.

Table VII-28—Continued
PET: Exports from Canada, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Unit value (dollars per pound)		
Exports from Canada to the United States	0.58	0.47	0.50
Exports from Canada to other major destination markets.--			
Malaysia	0.97	1.00	1.03
Luxembourg	0.77	0.84	0.47
Portugal	---	0.50	0.52
China	1.06	1.03	1.03
Mexico	0.59	0.54	0.78
Ireland	0.94	1.04	1.02
Netherlands	0.92	1.03	1.06
Korea	1.06	1.13	1.13
All other destination markets	0.54	1.25	0.92
Total exports from Canada	0.59	0.49	0.52
	Share of quantity (percent)		
Exports from Canada to the United States	96.1	93.8	92.6
Exports from Canada to other major destination markets.--			
Malaysia	2.2	2.9	2.9
Luxembourg	0.0	0.0	1.7
Portugal	---	0.2	1.5
China	1.0	0.8	0.6
Mexico	0.3	2.1	0.5
Ireland	0.1	0.1	0.1
Netherlands	0.0	0.0	0.0
Korea	0.0	0.0	0.0
All other destination markets	0.2	0.0	0.0
Total exports from Canada	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Note.--Data presented may also include some volume of out-of-scope merchandise, such as PETG, PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram, and PET resin that contains more than 50 percent recycled product by weight.

Source: Official exports statistics under HS subheading 3907.60, 3907.61, and 3907.69 as reported by Canada Statistics in the Global Trade Atlas database, accessed July 10, 2018.

Mexico

Table VII-29 shows Mexican producers' plant locations, raw materials, and capacity. Alpek, a major PTA supplier for the M&G (Mossi & Ghisolfi) Group, stopped supplying M&G from both its Mexico and Brazil locations, and as of October 16, 2017 M&G shut down its Mexican PET plant "due to liquidity constraints."[54] As of October 27, 2017, M&G ceased PET resin production at all of its plants worldwide following its bankruptcy filings.[55]

Table VII-29
PET resin: Mexican producers' plant locations, raw materials, and capacity, 2014 and 2017, and projected capacity 2022

* * * * * * *

During 2017, reported PET resin capacity in Mexico was ***, total production in Mexico was ***, and consumption in Mexico was ***. The production capacity of PET resin in Mexico is expected to decline by *** annually, whereas consumption is expected to increase by *** annually. The largest end use for PET resin in Mexico is ***, which accounted for *** percent of the country's total consumption in 2017 and is expected to *** and account for *** percent by 2022.[56]

According to data compiled in response to Commission questionnaires, Mexico was the largest single source of U.S. imports of PET resin during 2015-17. On a quantity basis, Mexico accounted for *** percent of total U.S. imports in 2015, *** percent in 2016, and *** percent in 2017 (see table IV-2). *** accounted for *** percent of reported imports from Mexico in 2017. GTA data indicate that the United States is the leading export market for PET produced in Mexico (table VII-30). During 2017, exports of PET to the United States amounted to 563.0 million pounds and accounted for 62 percent of its total exports. Mexico's second largest export market is Colombia, which account for 12 percent of total exports during 2017.

[54] S&P Global, "*Mossi Ghisolfi money woes affecting Americas petrochemical operations,*" *https://www.platts.com/latest-news/petrochemicals/houston/mossi-ghisolfi-money-woes-affecting-americas-21287475*, retrieved August 10, 2018.

[55] *M&G Group Companies in Bankruptcy Filing,* http://www.chemanager-online.com/en/news-opinions/headlines/mg-group-companies-bankruptcy-filing, retrieved August 10, 2018.

[56] *Chemical Economics Handbook Polyethylene Terephthalate (PET) Solid-State Resins,* IHS, 2018, pp. 57-60.

Table VII-30

PET: Exports from Mexico, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Quantity (1,000 pounds)		
Exports from Mexico to the United States	564,857	654,901	563,044
Exports from Mexico to other major destination markets.--Colombia	196,540	159,862	105,404
Italy	269	4,867	76,051
Venezuela	97,037	18,748	20,941
Dominican Republic	20,531	21,070	20,466
Portugal	220	14,163	18,184
Brazil	21,571	21,567	17,646
Luxembourg	505	139	17,079
Uruguay	8,181	13,952	8,969
All other destination markets	114,863	91,333	60,823
Total exports from Mexico	1,024,574	1,000,603	908,607
	Value (1,000 dollars)		
Exports from Mexico to the United States	310,043	311,092	285,857
Exports from Mexico to other major destination markets.--Colombia	101,230	71,360	54,561
Italy	84	2,189	40,960
Venezuela	67,918	12,334	12,120
Dominican Republic	10,177	9,277	10,500
Portugal	39	5,911	8,022
Brazil	11,297	9,944	8,381
Luxembourg	275	71	8,014
Uruguay	3,734	6,297	4,715
All other destination markets	38,487	34,430	29,361
Total exports from Mexico	543,285	462,904	462,492

Table continued on next page.

Table VII-30—Continued
PET: Exports from Mexico, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Unit value (dollars per pound)		
Exports from Mexico to the United States	0.55	0.48	0.51
Exports from Mexico to other major destination markets.--			
Colombia	0.52	0.45	0.52
Italy	0.31	0.45	0.54
Venezuela	0.70	0.66	0.58
Dominican Republic	0.50	0.44	0.51
Portugal	0.18	0.42	0.44
Brazil	0.52	0.46	0.47
Luxembourg	0.54	0.51	0.47
Uruguay	0.46	0.45	0.53
All other destination markets	0.34	0.38	0.48
Total exports from Mexico	0.53	0.46	0.51
	Share of quantity (percent)		
Exports from Mexico to the United States	55.1	65.5	62.0
Exports from Mexico to other major destination markets.--			
Colombia	19.2	16.0	11.6
Italy	0.0	0.5	8.4
Venezuela	9.5	1.9	2.3
Dominican Republic	2.0	2.1	2.3
Portugal	0.0	1.4	2.0
Brazil	2.1	2.2	1.9
Luxembourg	0.0	0.0	1.9
Uruguay	0.8	1.4	1.0
All other destination markets	11.2	9.1	6.7
Total exports from Mexico	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Note.--Data presented may also include some volume of out-of-scope merchandise, such as PETG, PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram, and PET resin that contains more than 50 percent recycled product by weight.

Source: Official exports statistics under HS subheading 3907.60, 3907.61, and 3907.69 as reported by NEGI in the Global Trade Atlas database, accessed July 10, 2018.

APPENDIX A

FEDERAL REGISTER NOTICES

The Commission makes available notices relevant to its investigations and reviews on its website, www.usitc.gov. In addition, the following tabulation presents, in chronological order, *Federal Register* notices issued by the Commission and Commerce during the current proceeding.

Citation	Title	Link
83 FR 17791 April 24, 2018	Antidumping Duty Investigations on Polyethylene Terephthalate Resin From Indonesia, the Republic of Korea, and Taiwan; Preliminary Determinations of Critical Circumstances	https://www.gpo.gov/fdsys/pkg/FR-2018-04-24/pdf/2018-08692.pdf
83 FR 19696 May 4, 2018	Polyethylene Terephthalate Resin From Taiwan: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Postponement of Final Determination, and Extension of Provisional Measures	https://www.gpo.gov/fdsys/pkg/FR-2018-05-04/pdf/2018-09515.pdf
83 FR 19689 May 4, 2018	Polyethylene Terephthalate Resin From Pakistan: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Postponement of Final Determination, and Extension of Provisional Measures	https://www.gpo.gov/fdsys/pkg/FR-2018-05-04/pdf/2018-09511.pdf
83 FR 19694 May 4, 2018	Polyethylene Terephthalate Resin From the Republic of Korea: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Postponement of Final Determination, and Extension of Provisional Measures	https://www.gpo.gov/fdsys/pkg/FR-2018-05-04/pdf/2018-09521.pdf
83 FR 19691 May 4, 2018	Polyethylene Terephthalate Resin From Indonesia: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Postponement of Final Determination, and Extension of Provisional Measures	https://www.gpo.gov/fdsys/pkg/FR-2018-05-04/pdf/2018-09510.pdf
83 FR 19699 May 4, 2018	Polyethylene Terephthalate Resin From Brazil: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Postponement of Final Determination, and Extension of Provisional Measures	https://www.gpo.gov/fdsys/pkg/FR-2018-05-04/pdf/2018-09516.pdf
83 FR 26306 June 6, 2018	Polyethylene Terephthalate (PET) Resin From Brazil, Indonesia, Korea, Pakistan, and Taiwan; Scheduling of the Final Phase of Anti-Dumping Duty Investigations	https://www.gpo.gov/fdsys/pkg/FR-2018-06-06/pdf/2018-12094.pdf
83 FR 48285 September 24, 2018	Polyethylene Terephthalate Resin From Brazil: Final Determination of Sales at Less Than Fair Value	https://www.gpo.gov/fdsys/pkg/FR-2018-09-24/pdf/2018-20719.pdf
83 FR 48281 September 24, 2018	Polyethylene Terephthalate Resin From Pakistan: Final Determination of Sales at Less Than Fair Value	https://www.gpo.gov/fdsys/pkg/FR-2018-09-24/pdf/2018-20722.pdf

83 FR 48287 September 24, 2018	Polyethylene Terephthalate Resin From Taiwan: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Determination of Critical Circumstances, in Part	https://www.gpo.gov/fdsys/pkg/FR-2018-09-24/pdf/2018-20723.pdf
83 FR 48278 September 24, 2018	Polyethylene Terephthalate Resin From Indonesia: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Determination of Critical Circumstances, in Part	https://www.gpo.gov/fdsys/pkg/FR-2018-09-24/pdf/2018-20720.pdf
83 FR 48283 September 24, 2018	Polyethylene Terephthalate Resin From the Republic of Korea: Affirmative Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part	https://www.gpo.gov/fdsys/pkg/FR-2018-09-24/pdf/2018-20721.pdf

APPENDIX B

LIST OF HEARING WITNESSES

CALENDAR OF PUBLIC HEARING

Those listed below appeared as witnesses at the United States International Trade Commission's hearing:

Subject: Polyethylene Terephthalate (PET) Resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan

Inv. Nos.: 731-TA-1387-1391 (Final)

Date and Time: September 13, 2018 - 9:30 a.m.

Sessions were held in connection with these investigations in the Main Hearing Room (Room 101), 500 E Street, SW., Washington, DC.

EMBASSY APPEARANCE:

The Embassy of the Republic of Indonesia
Washington, DC

Reza Pahlevi Chairul, Commercial Attaché

OPENING REMARKS:

Petitioner (**Kathleen W. Cannon**, Kelley Drye & Warren LLP)
Respondents (**Susan G. Esserman**, Steptoe & Johnson LLP)

In Support of the Imposition of Antidumping Duty Orders:

Kelley Drye & Warren LLP
Washington, DC
on behalf of

DAK Americas LLC
Indorama Ventures USA, Inc.
M&G Polymers USA, LLC
Nan Ya Plastics Corporation, America

Jon McNaull, Vice President, PET Resin, DAK Americas LLC

Ricky Lane, Director of Communications and Government Relations, DAK Americas LLC

John Freeman, Assistant Director of Sales, Nan Ya Plastics Corporation, America

In Support of the Imposition of
Antidumping Duty Orders (continued):

Muthukumar Paramasivam, Senior Vice President and Head of Sales and Marketing, Indorama Ventures USA, Inc.

John Cullen, Director, PET Resin Sales, DAK Americas LLC

Gina E. Beck, Economist, Georgetown Economic Services

Brad Hudgens, Economist, Georgetown Economic Services

Paul C. Rosenthal)
Kathleen W. Cannon) – OF COUNSEL
Brooke M. Ringel)

In Opposition to the Imposition of
Antidumping Duty Orders:

Steptoe & Johnson LLP
Washington, DC
on behalf of

Graham Packaging Company
Pactiv LLC
The American Beverage Association
iResin LLC

Clinton Berry, Senior Director of Global Resin Procurement, PepsiCo, Inc.

Sarah Ryan, Senior Legal Director, PepsiCo, Inc.

Stephen Ream, Senior Director Global Sourcing, Graham Packaging Company

Bruce Malashevich, President and Chief Economist, Economic Consulting Services

Cara Groden, Economist, Economic Consulting Services

Susan G. Esserman)
Joel D. Kaufman) – OF COUNSEL
Zhu (Judy) Wang)

In Opposition to the Imposition of
Antidumping Duty Orders (continued):

Bruce Malashevich, President and Chief Economist,
Economic Consulting Services

Cara Groden, Economist, Economic Consulting Services

Susan G. Esserman)
Joel D. Kaufman) – OF COUNSEL
Zhu (Judy) Wang)

Sidley Austin LLP
Washington, DC
on behalf of

Novatex Limited
G-Pac Corporation

Rizwan Diwan, Executive Director, Novatex Limited

Kafeel Zehri, Senior Manager, Finance, Novatex Limited

Aziz Abdul Malik, Senior Manager, Marketing and Exports,
Novatex Limited

Yousuf Sattar, Chief Financial Officer, G-Pac Corporation

Brenda A. Jacobs)
Neil R. Ellis) – OF COUNSEL
Carys Golesworthy)

Neville Peterson LLP
New York, NY
on behalf of

Niagara Bottling LLC ("Niagara")

Shawn Safieiddin, Vice President of Procurement, Niagara

John M. Peterson) – OF COUNSEL

REBUTTAL/CLOSING REMARKS:

Petitioner (**Paul C. Rosenthal**, Kelley Drye & Warren LLP)
Respondents (**Joel D. Kaufman**, Steptoe & Johnson LLP; and **Brenda A. Jacobs**,
Sidley Austin LLP)

APPENDIX C

SUMMARY DATA

Table C-1
PET resin: Summary data concerning the U.S. market, 2015-17, January to March 2017, and January to March 2018
(Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted)

	Reported data					Period changes			
	Calendar year			January to March		Calendar years			Jan-Mar
	2015	2016	2017	2017	2018	2015-17	2015-16	2016-17	2017-18
U.S. consumption quantity:									
Amount	6,322,145	6,870,713	7,006,847	1,728,191	1,713,507	10.8	8.7	2.0	(0.8)
Producers' share (fn1)	84.9	79.5	80.9	76.3	81.1	(4.0)	(5.4)	1.4	4.8
Importers' share (fn1):									
Brazil	***	***	***	***	***	***	***	***	***
Indonesia	***	***	***	***	***	***	***	***	***
Korea	***	***	***	***	***	***	***	***	***
Pakistan	***	***	***	***	***	***	***	***	***
Taiwan	***	***	***	***	***	***	***	***	***
Subject sources	4.2	10.0	11.9	12.5	6.8	7.7	5.8	1.8	(5.7)
Canada	***	***	***	***	***	***	***	***	***
Mexico	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***
Nonsubject sources	10.9	10.5	7.2	11.2	12.1	(3.6)	(0.4)	(3.2)	0.9
All import sources	15.1	20.5	19.1	23.7	18.9	4.0	5.4	(1.4)	(4.8)
U.S. consumption value:									
Amount	3,668,280	3,499,264	3,762,533	926,897	1,058,142	2.6	(4.6)	7.5	14.2
Producers' share (fn1)	85.6	80.5	81.2	76.6	81.2	(4.5)	(5.1)	0.7	4.6
Importers' share (fn1):									
Brazil	***	***	***	***	***	***	***	***	***
Indonesia	***	***	***	***	***	***	***	***	***
Korea	***	***	***	***	***	***	***	***	***
Pakistan	***	***	***	***	***	***	***	***	***
Taiwan	***	***	***	***	***	***	***	***	***
Subject sources	3.8	9.4	11.6	12.0	6.7	7.9	5.6	2.2	(5.3)
Canada	***	***	***	***	***	***	***	***	***
Mexico	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***
Nonsubject sources	10.6	10.1	7.2	11.3	12.0	(3.4)	(0.5)	(2.9)	0.7
All import sources	14.4	19.5	18.8	23.4	18.8	4.5	5.1	(0.7)	(4.6)
U.S. importers' U.S. shipments of imports from:									
Brazil:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Indonesia:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Korea:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Pakistan:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Taiwan:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Subject sources:									
Quantity	265,665	688,945	831,253	216,086	116,568	212.9	159.3	20.7	(46.1)
Value	138,034	328,810	437,923	111,554	71,360	217.3	138.2	33.2	(36.0)
Unit value	$0.52	$0.48	$0.53	$0.52	$0.61	1.4	(8.1)	10.4	18.6
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Canada:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Mexico:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
All other sources:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Nonsubject sources:									
Quantity	687,027	719,335	507,360	193,880	207,384	(26.2)	4.7	(29.5)	7.0
Value	388,725	353,862	270,333	105,030	127,104	(30.5)	(9.0)	(23.6)	21.0
Unit value	$0.57	$0.49	$0.53	$0.54	$0.61	(5.8)	(13.1)	8.3	13.1
Ending inventory quantity	***	***	***	***	***	***	***	***	***
All import sources:									
Quantity	952,692	1,408,280	1,338,613	409,966	323,952	40.5	47.8	(4.9)	(21.0)
Value	526,759	682,672	708,256	216,584	198,464	34.5	29.6	3.7	(8.4)
Unit value	$0.55	$0.48	$0.53	$0.53	$0.61	(4.3)	(12.3)	9.1	16.0
Ending inventory quantity	***	***	***	***	***	***	***	***	***

Table continued on next page.

Table C-1--Continued
PET resin: Summary data concerning the U.S. market, 2015-17, January to March 2017, and January to March 2018
(Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted)

	Reported data					Period changes			
	Calendar year			January to March		Calendar years			Jan-Mar
	2015	2016	2017	2017	2018	2015-17	2015-16	2016-17	2017-18
U.S. producers':									
Average capacity quantity	6,923,512	6,923,512	6,817,262	1,730,878	1,563,574	(1.5)	---	(1.5)	(9.7)
Production quantity	5,609,164	5,871,344	5,596,329	1,198,814	1,392,224	(0.2)	4.7	(4.7)	16.1
Capacity utilization (fn1)	81.0	84.8	82.1	69.3	89.0	1.1	3.8	(2.7)	19.8
U.S. shipments:									
Quantity	5,369,453	5,462,433	5,668,234	1,318,225	1,389,555	5.6	1.7	3.8	5.4
Value	3,141,521	2,816,592	3,054,277	710,313	859,678	(2.8)	(10.3)	8.4	21.0
Unit value	$0.59	$0.52	$0.54	$0.54	$0.62	(7.9)	(11.9)	4.5	14.8
Export shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Inventories/total shipments (fn1)	***	***	***	***	***	***	***	***	***
Production workers	889	886	931	933	813	4.7	(0.3)	5.1	(12.9)
Hours worked (1,000s)	1,865	1,959	2,054	518	456	10.1	5.0	4.8	(12.0)
Wages paid ($1,000)	70,785	68,629	66,190	17,292	14,590	(6.5)	(3.0)	(3.6)	(15.6)
Hourly wages (dollars per hour)	$37.95	$35.03	$32.22	$33.38	$32.00	(15.1)	(7.7)	(8.0)	(4.2)
Productivity (pounds per hour)	3,007.6	2,997.1	2,724.6	2,314.3	3,053.1	(9.4)	(0.3)	(9.1)	31.9
Unit labor costs (dollars per 1,000 pounds)	$12.62	$11.69	$11.83	$14.42	$10.48	(6.3)	(7.4)	1.2	(27.3)
Net sales:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Cost of goods sold (COGS)	***	***	***	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***	***
Net income or (loss)	***	***	***	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***	***	***	***
Unit net income or (loss)	***	***	***	***	***	***	***	***	***
COGS/sales (fn1)	***	***	***	***	***	***	***	***	***
Operating income or (loss)/sales (fn1)	***	***	***	***	***	***	***	***	***
Net income or (loss)/sales (fn1)	***	***	***	***	***	***	***	***	***

Notes:

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined.

Source: Compiled from data submitted in response to Commission questionnaires.

APPENDIX D

PRODUCERS' AND IMPORTERS' COMMERCIAL U.S. SHIPMENTS, BY CUSTOMER AND APPLICATION

Table D-1
PET resin: U.S. producers' and subject U.S. importers' top five customers for PET resin in hot-fill applications, 2017

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Table D-2
PET resin: U.S. producers' and subject U.S. importers' top five customers for PET resin in other than hot-fill applications, 2017

* * * * * * *

APPENDIX E

NONSUBJECT COUNTRY PRICE DATA

One importer reported price data for Canadian products 1-4 and three importers reported price data for Mexican products 1-4. Price data reported by these firms accounted for *** percent of U.S. commercial shipments of product from Canada and *** percent of product from Mexico. These price items and accompanying data are comparable to those presented in tables V-3 to V-6. Price and quantity data for Canada and Mexico are shown in tables E-1 to E-4 and in figures E-1 to E-4 (with domestic and subject sources).

In comparing Canadian and Mexican pricing data with U.S. producer pricing data, prices for product imported from Canada and Mexico were lower than prices for U.S.-produced product in 39 instances and higher in 41 instances. In comparing Canadian and Mexican pricing data with subject country pricing data, prices for product imported from Canada were lower than prices for product imported from subject countries in 20 instances and higher in 10 instances. Imports from Mexico were lower than prices for product imported from subject countries in 22 instances and higher in 28 instances. A summary of price differentials is presented in table E-5.

Table E-1

PET resin: Weighted-average f.o.b. prices and quantities of imported product 1, by quarters, January 2015-March 2018

* * * * * * *

Table E-2

PET resin: Weighted-average f.o.b. prices and quantities of imported product 2, by quarters, January 2015-March 2018

* * * * * * *

Table E-3

PET resin: Weighted-average f.o.b. prices and quantities of imported product 3, by quarters, January 2015-March 2018

* * * * * * *

Table E-4

PET resin: Weighted-average f.o.b. prices and quantities of imported product 4, by quarters, January 2015-March 2018

* * * * * * *

Figure E-1

PET resin: Weighted-average f.o.b. prices and quantities of domestic and imported product 1, by quarters, January 2015-March 2018

* * * * * * *

Figure E-2

PET resin: Weighted-average f.o.b. prices and quantities of domestic and imported product 2, by quarters, January 2015-March 2018

* * * * * * *

Figure E-3

PET resin: Weighted-average f.o.b. prices and quantities of domestic and imported product 3, by quarters, January 2015-March 2018

* * * * * * *

Figure E-4

PET resin: Weighted-average f.o.b. prices and quantities of domestic and imported product 4, by quarters, January 2015-March 2018

* * * * * * *

Table E-5

PET resin: Summary of underselling/(overselling), by country, January 2015-March 2018

Comparison	Total number of comparisons	Nonsubject lower than the comparison source		Nonsubject higher than the comparison source	
		Number of quarters	Quantity (pounds)	Number of quarters	Quantity (pounds)
Nonsubject vs United States:					
Canada vs. United States	30	21	***	9	***
Mexico vs. United States	49	17	***	32	***
Nonsubject vs subject countries:					
Canada vs. Brazil	20	12	***	8	***
Mexico vs Brazil	34	18	***	16	***
Canada vs Indonesia	2	1	***	1	***
Mexico vs Indonesia	13	4	***	9	***
Canada vs Korea	7	3	***	4	***
Mexico vs Korea	21	9	***	12	***
Canada vs Pakistan	14	9	***	5	***
Mexico vs Pakistan	30	14	***	16	***
Canada vs Taiwan	28	19	***	9	***
Mexico vs Taiwan	47	15	***	32	***
Canada vs cumulated subject sources	30	20	***	10	***
Mexico vs cumulated subject sources	49	21	***	28	***